

Chino Hills State Park



Draft Environmental Impact Report SCH# 2004021037

August 2004

California Department of Parks & Recreation



Vicinity Map



EXECUTIVE SUMMARY

The project is located within Chino Hills State Park, a 12,452-acre park stretching more than 10 miles from east to west and nearly 8 miles from north to south. Chino Hills State Park is within an hour's drive of 15 million people in southern California and largely undeveloped except for an extensive trail system of over 60 miles. The park lies adjacent to seven different communities and is popular with hikers, mountain bicyclists, and equestrians. The Chino Hills Entrance Road & Facilities project is proposed as a site-specific project under the approved 1999 Chino Hills State Park General Plan. The project site is located within the City of Chino Hills in San Bernardino County. The site was chosen because it provides the only vehicular access to the interior of the park and the campgrounds and day-use sites serving the both the region and the eastern end of the park. Planning and construction of other facilities under the 1999 General Plan is ongoing, including the construction of a new Visitor Center serving the western portion of the Park in Orange County and new interpretive facilities, as part of a biological restoration, in Riverside County near State Route 91.

The existing entrance road is a narrow dirt and gravel road that is frequently closed during rain events due to hazardous road conditions and slope failures. The unimproved surface, combined with the narrow road width and steep grade, prevents many vehicles, including recreational vehicles, school buses, and some trucks with horse trailers from entering the park. The proposed project would construct a new road along the same general alignment as the existing road. There are existing conflicts between the neighborhood adjacent to the existing entrance road and park users. These issues are addressed in Section 1.4 and Section 4.

The EIR addresses the proposed project and a range of project alternatives that were considered during the planning process in Section 2. The proposed project consists of constructing the following: approximately two miles of a 2-lane, asphalt paved "all-weather" entrance road, a decomposed granite (dg) or natural surface "multi-use" trail (for equestrians, bicyclists, and hikers); a new entrance station; a restroom building; and, a park maintenance storage building, and other park amenities. The environmental effects of the proposed project are addressed in Sections 5.1 to 5.4.

The Alternatives Analysis is addressed in Sections 2.3 and 5.5 and includes the No Project Alternative and an Environmentally Superior Alternative. The Environmentally Superior Alternative would require obtaining an easement or additional right of way from a private landholder that is unwilling to grant title to California State Parks. The Alternatives chosen were based upon a separate study (the July 2002 Final Concept Report for the Chino Hills State Park Entrance Roads Alternatives Study) prepared for California State Parks by an outside consultant.

A mitigation monitoring program and record will be finalized as part of the project approval after the public review and comment period. The Chino Hills Entrance Road and Facilities project may potentially cause significant effects to biological resources (including sensitive species), wetlands, water quality and hydrology/floodplains, air

quality, noise, public utilities and aesthetics. Potential impacts to biological resources, paleontology, geologic resources, hydrology/floodplain, water quality, noise, air quality, and public utilities will be mitigated below significance. However, the aesthetic effect of project will not be fully mitigated. A Statement of Overriding Considerations will be made for this impact, as needed. Potential impacts to cultural resources, traffic, mineral resources, agriculture, land use, planning, and hazards associated with hazardous waste are less than significant and will be managed according accepted protocols, as necessary.

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1 PURPOSE & NEED

This Draft Environmental Impact Report (DEIR), SCH #2004021037, has been prepared by the California State Parks (CSP) to evaluate the potential environmental effects of the proposed Entrance Road Project at Chino Hills State Park, in San Bernardino County, California. The purpose of the DEIR is to assist decision makers and the public to make an informed evaluation of the project based on its environmental consequences and to recommend actions to avoid, reduce or minimize those consequences. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study was prepared by CSP to determine if the Chino Hills State Park Entrance Road and Facilities project would have a significant effect on the environment [CEQA Guidelines §15063(a)]. This Initial Study is attached in Appendix A and was submitted for public review with the Notice of Preparation. There is substantial evidence that this project may have a significant effect on the environment, therefore an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). Mitigation measures have also been incorporated into the project to reduce or minimize potentially significant impacts.

Further, because several of the proposed actions may either permanently or temporarily affect the floodplain, water quality, and species listed as threatened or endangered, additional permits or approvals may be needed from the following agencies:

United States Army Corp of Engineers
United States Fish and Wildlife Service
California Department of Fish and Game
California Regional Water Quality Control Board, Santa Ana Region
City of Chino Hills

1.1 PROJECT BACKGROUND

Chino Hills State Park is located at the junction of Orange, Riverside and San Bernardino counties in southern California (Please see Figures 1 & 2). It is located adjacent to densely populated urban communities and 15 million people are located within an hour's drive. Despite the close proximity of urban uses, the park preserves its natural landscape features, biological diversity and opportunities for solitude. The park is currently used primarily for mountain biking, hiking, bird watching, equestrian trail riding and limited camping. Although the Park is an ideal outdoor classroom, school buses cannot utilize the existing entrance road. California State Parks seeks to make the park more accessible to a greater number of people through an increase in the availability and variety of improved access, site amenities and camping facilities.

On February 23, 1999, the California State Park Recreation Commission adopted the Chino Hills State Park General Plan. Incorporated within the General Plan was a Master EIR that identified the Entrance Road site as a center of activity within the park. Subsequent to approval of the General Plan and EIR, the California Department of Parks and Recreation has prepared the Chino Hills Entrance Road & Facilities capital outlay budget package and received budget approval to proceed with the construction of the project. California State Parks is the Lead Agency for this project.

The General Plan identifies several possible locations for an entrance road through the Recreation and Operations Zone. The Recreation and Operations Zone allowed for development of an entrance road either at the park's northeastern or eastern edge of the park at Bane Canyon or Slaughter Canyon. The majority of the park was designated as Natural Open Space Zone or Core Habitat Zone therefore all other sites were excluded. Construction of the entrance road will support park use by both the region and the Riverside and San Bernardino County populations and improve access for all types of vehicles to utilize planned camping and day-use facilities at the Rolling M Ranch. The approved 1999 General Plan allowed for a new entrance road at either the Bane Canyon (existing) or Slaughter Canyon alignments. California State Parks entered into negotiations to obtain access rights through a private landholding to allow the entrance road alignment in Slaughter Canyon. The private landholder was unwilling to grant or sell title to CSP for an entrance road and negotiations were terminated.

1.2 PROJECT NEED

The adjacent Inland Empire (San Bernardino and Riverside Counties) is the second fastest growing region for population growth in the state. Orange County has the second highest population density in the state. These large urban populations indicate a strong need for visitor services at Chino Hills State Park. A 2003 survey by Decision Research indicated that voters in nearby communities are very supportive of retaining open space for a variety of reasons. The use of California's park and recreation areas near urban populations is heavy and continues to increase.

In the study on "Public Opinions and Attitudes on Outdoor Recreation in California 1997", 98 percent of the respondents indicated that just being in the outdoors is an important part of the enjoyment of their most favorite activities. More than 80 percent of the respondents indicated that outdoor recreation is *important* or *very important* to their quality of life. The study identified public demand for a variety of outdoor activities. The proposed project will provide six of the top fifteen outdoor activities to the public. These activities, in order of demand are recreational walking, visiting museums/historic site, picnicking in developed sites, trail hiking, attending outdoor cultural events, nature and wildlife study. Additionally, mountain biking and equestrian riding are very popular in the extended area surrounding the entrance road site.

The project will address a need within the park for the public to utilize the Rolling M Ranch public use area and campground. First, the Entrance Road & Facilities project will help entice visitors to the Park interior, by providing an improved entrance road, kiosk and restroom facilities, and a parking area at a point that provides better access for the

region and more people of the nearby communities. Second, the existing entrance road is often closed due to small landslides and slippery road conditions during rain events because of the unimproved surface. The existing park entrance is inadequate for user needs nor does it allow access for all vehicle types, including school buses. The following quote appeared in the October 2003 Western Times magazine evaluation of the park: *“Through the park’s seriously un-spectacular entrance - a small fence break, marked by only a small sign – we followed the harsh, narrow gravel road up a steep incline to the collection booth...”*. It is clear that the existing entrance road prevents park users from entering the park’s interior. Additionally, the project will improve the separation of vehicles and recreational trail users along the entire Bane Canyon corridor, making for a more enjoyable visitor experience. The road dust will be eliminated as vehicles traverse the road. There will be less erosion and sedimentation and improved water quality where the road is removed from the creek bed.

Appendix D of the Chino Hills State Park General Plan identifies a worst-case public use scenario. This scenario was estimated for the purposes of evaluating the potential environmental impacts of park development and represented one of a range of possibilities. This scenario assumed a visitor center at Upper Aliso/Bane Canyon with up to 120 vehicles and a total of 945 trips per day. The Visitor Center was moved to serve the park users at the other end of the Park in Orange County. This action reduced the number of trips accessing from the east. The entrance road will provide access to the Park interior and the new public use facilities at the Rolling M Ranch.

1.3 IDENTIFIED PUBLIC CONCERNS

A public information meeting was held on February 11, 2004. Over 200 notices were mailed out, including over 150 notices to the adjacent neighborhood. Attendance at the meeting was moderate with 22 people signed in and several more in attendance that did not sign in. Several persons at the meeting, including a representative from the City of Chino Hills, expressed concerns regarding existing and potential conflicts between the adjacent neighborhood and the park users, traffic, safety, the need to protect the City Water & Sewer Division waterline and storage facility in the project area. Others expressed a strong desire to have the road constructed. Issues identified at the meeting and with receipt of the Notice of Preparation responses include: The City of Chino Hills concerns regarding traffic impacts both for traffic safety and actual numbers, speed control down Elinvar Drive (a City street), noise, public safety and maintenance uses, the ongoing parking issues of park visitors, equestrian user access, day-use versus potential night use by campers (campers will have access through the locked gate at night), City reservoir protection & access, aesthetics, an early evaluation of geotech information, construction impacts, public access as well as access for the water tank and line maintenance during construction, and plans for Southern California Edison to develop a new line location on their existing easement near the entrance road.

Members of the public at the meeting identified a broad range of concerns that included:

- Placement of trash cans & signs near the park entrance to encourage park users to clean up their trash and horse manure

- Equestrians at the meeting state that they do clean up by their trailers & can't use the entrance road because of vehicle wear & tear & safety
- Request that we look at the Carbon Canyon Entrance and that the Bane Canyon entrance is a terrible idea
- Concern about the steepness of the grade remain the same?
- Request that staging locations be located away from the end of the road.
- A concern that the dirt road filters the park users to a group that is "more respectful" of the park
- Consideration of parking/kiosk right at the entrance of the park, then agreed that it should be moved to the interior to reduce the Park presence behind the neighborhood
- Need to reduce speeds on Sapphire Road and Elinvar Drive (both City Streets)
- Several statements that the Park has overcome many obstacles but it's time to move on with an entrance road – not wait for an unwilling seller to change. Also a statement that the Park's open space significantly adds to the value of the adjacent residential properties and City's economic base.
- There were also questions about fire danger to trail users and plans for the existing campgrounds, and equestrian corrals.
- A park user stated that Chino Hills SP is a clean park and most care about the environment – everybody smiles.
- The park is nice because it's exclusive
- From the business perspective, the Slaughter Canyon Entrance would be better – the City should have the park be more visible
- Should consider shutting the park to construct the road in a shorter time frame.
- Any equipment parked on or near the site needs reflectors
- There will be a lot of bike riders that may not drive in and might park in the neighborhood.

The NOP responses are located in Appendix A of this EIR.

1.4 CEQA PROCESS

The California Environmental Quality Act (CEQA) of 1970 establishes a requirement for state agencies to analyze and disclose the potential environmental effects of a proposed action. However, CEQA also encourages options to avoid needless redundancy and duplication, such as combining General Plans and EIRs (CEQA Guidelines 15166) and the use of tiering, a process where a lead agency prepares a series of EIRs, progressing from general concerns to more site-specific evaluations with the preparation of each new document (CEQA Guidelines 15152). This EIR is a site-specific document prepared under the Chino Hills State Park General Plan SCH #1998101049.

Where a proposed project covers a wide spectrum of action, from the adoption of a Plan, which is by definition tentative and subject to further refinement, to activities with a site-specific impact, CEQA requires that "environmental impact reports shall be tiered whenever feasible[.]" (Public Resources Code sec. 21093(b).) Tiering is defined as "the coverage of general matters and environmental effects in an environmental impact report

prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports...” (PRC sec. 21068.5; CEQA Guidelines sec. 15385.)

1.4.1 Structure and Contents of the EIR

The CEQA Guidelines (Title 14. California Code of Regulations), Article 9. Contents of EIR Section 15120(c) states that Draft EIRs shall contain the information required by Sections 15122 through 15131. The following table shows where the required items are found in this EIR.

Location of EIR Required Content

CEQA Guidelines Content	Location in EIR
15122 Table of Contents or Index	Beginning of this document.
15123 Summary	Precedes the <i>Table of Contents</i>
15124 Project Description	Ch. 2 <i>Project Description</i>
15125 Environmental Setting	Ch. 3 <i>Environmental Setting.</i>
15126 Consideration & Discussion of Environmental Impacts	Ch. 5 <i>Environmental Effects & Mitigation</i>
(a) Significant Environmental Effects of the Proposed Project.	Sec. 5.1. Significant Effect & Proposed Mitigation.
(b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented.	Sec. 5.1. Significant Effect & Proposed Mitigation.
(c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented.	Sec. 6.1 Significant Irreversible Environmental Changes which Cannot be Avoided
(d) Growth-Inducing Impact of the Proposed Project.	Sec. 6.3
(e) The Mitigation Measures Proposed to Minimize the Significant Effects.	Ch 5, Section 5.1
(f) Alternatives to the Proposed Project.	Sections 2.3 and 5.5
15127 Limitations on Discussion of Environmental Impact	Ch. 5 & Appendix A
15128 Effects Not Found to be Significant	Sections 5.2 and 5.3 Effects found not to be significant Appendix A (attaches the Initial Study)
15129 Organizations and Persons Consulted	Ch. 5 <i>References</i> Sec. 5.4 Report Preparers
15130 Discussion of Cumulative Impacts	Sec. 6.4
15131 Economic and Social Effects (optional topic)	Ch. 4 Known Controversies

Uses of This EIR

The EIR has been prepared by the California Department of Parks and Recreation, Park Acquisition and Development Division, Southern Service Center. California State Park

and Recreation Commission has approval authority for all State Park General Plan/EIRs which is the first tier document under which this EIR has been prepared. According the California State Parks Department Operations Manual, the Director, the Deputy Director of Operations, or Deputy Director of the Acquisition and Development Division, has the authority to accept the certified EIR as a “Final EIR” under CEQA Guidelines Section 15166 and approve the Notice of Determination.

2 PROJECT DESCRIPTION

The California State Park's mission includes the protection of natural and cultural resources; therefore an appropriate combination of resource avoidance, mitigation, and monitoring will be employed throughout the project design, construction, and operations. Approximately 12 acres will be directly affected by the project implementation. Please see Figure 2.1.

Resource data, operational support needs, available right of way, and public desires discovered during the planning, alternatives analysis, scoping meetings, and design of the project were incorporated to develop the proposed project's preferred alternative. Additionally, the project description for the preferred alternative includes design detail for project implementation. This design detail may be further refined during in final plans provided that the refinements decrease potential environmental effects. A State Park Resource Ecologist will review all final plans prior to construction.

2.1 PROPOSED PROJECT (PREFERRED ALTERNATIVE)

The Preferred Alternative will develop a safe, "all weather" access road into Chino Hills State Park. It begins near the intersection of Sapphire Road and Elinvar Road at the current Park entrance, roughly follows the existing Bane Canyon entrance road, and ends at the paved portion of the park entrance road approximately two miles inside the Park. The estimated budget for construction is approximately \$10,500,000. Where feasible, the new entrance road and associated facilities have been designed to avoid sensitive resources, including wetland and riparian habitat. Because of the extremely steep topography along portions of alignment, options for the roadway location were constrained. The Preferred Alternative proposes a lower design speed and slightly narrower road width than the three alternatives discussed in Section 2.3. The Preferred Alternative also places the new roadway, where possible, partially up the slope away from the riparian area and utilizes the existing entrance road as a multi-use trail.

Portions of the project may be phased depending on the available funding. For example, the roadway construction and footprint will be a first order of construction and include the installation of electrical and communications conduits but it is likely that the installation of electrical and communication service would occur in a later phase. In order to describe the proposed site work the project description has been separated into the following subject areas:

2.1.1 Entrance Road

Road Design: This project will construct an "all-weather" AC paved roadway (22-foot wide paved section consists of 10-foot wide travel lanes with 1-wide foot edges) with 2-foot aggregate base shoulders. This road is designed for 25 mph speed but will be posted for 15 mph, the typical park speed limit. Additionally, the beginning (Sta. 1+17 to Sta. 32+78.27) and the ending (Sta. 117+60 to Sta. 122+70) portions of the road will have, paralleling it, a 10-foot wide "multi-use path" for hikers, equestrians, and bicycles.

Please refer to Figures 2.C-2 to 2.C-8 for project detail. Cut and fill slopes will be required throughout the project length and in combination with retaining walls. The maximum cut slope height will be 23 feet and the maximum fill slope height will be 18 feet. The earthwork on the project will balance the cut and fill material used on site. The slopes will be landscaped with native shrubs and grasses for erosion control.

Drainage Facilities: Drainage for the new entrance road will be accomplished with a combination of road shoulder drainage swales and catch basins with traffic rated grated inlets along the entire project, spaced at the appropriate distances to accept runoff from the 50-year storm. The inlets will be connected to corrugated metal (CMP) pipes with adequate energy dissipater outlet structures to provide erosion control from the discharged water.

Bridge Design: Bridges will be necessary at various locations along the new entrance road in order to traverse adjoining canyons and also Bane Canyon Creek itself. These bridge crossings will be made utilizing “steel frame railroad flatcar” type bridges of varying lengths (approx. 25 feet to 85 feet). It is anticipated that a total of six (6) bridges will be required with this project. They will be centered at the following approximate locations: Sta. 42+00; Sta. 87+65; Sta. 94+00; Sta. 115+90; Sta. 117+45; and, Sta. 123+12.

Retaining Walls: A combination of cantilever cast-in-place reinforced concrete and mechanically stabilized earth (MSE) retaining walls will be used for all retaining walls constructed for the new entrance road project. Wall heights will vary from 4 feet to 22 feet. Depending on slope stability data provided by the final project soils report the project may utilize a retaining wall / steep slope combination system in order to reduce wall heights. Walls will be located generally located on the “up-slope” side of the entrance road in the following approximate locations: Sta. 6+70 to Sta. 25+90; Sta. 90+90 to Sta. 93+45; Sta. 94+50 to Sta. 97+30.

2.1.2 Underground Utilities

Provide trenching, bedding, conduit, conductors and backfill for new electrical service within the roadway to connect to existing underground electrical transmission facilities within the park.

Provide trenching, bedding, conduit conductors and backfill for new telephone service within the new roadway and extended to the Rolling M Ranch area.

2.1.3 Entrance Station Kiosk

Provide new construction to complete the exterior building envelope and interior and expand the traffic paving area to accommodate traffic lanes. The building will be approximately 300 square feet.

The new entrance station kiosk building shall be provided with the following building services: HVAC, electricity, unisex ADA restroom, all plumbing connections to waterline and septic systems, telephone & security system.

Provide a new building waste disposal system complete with septic tank and leach field or seepage pit.

2.1.4 Mixed Use Trail & Trailhead

Provide a separate but largely parallel trail for the use of hikers, equestrians and bicyclists. The trail will need a fence where it is directly adjacent to the entrance road and along the slope edge between Stations 7+00 and 21+00. The fence will be constructed of wood or metal rail fencing. The trail will lie directly adjacent to the new road at the beginning and end and will follow the existing entrance road for the remainder of its length. The trail will utilize the natural soil material on site.

The berms along the existing entrance road will be pulled in several locations where the trail and the new road are separated. This will reduce the overall footprint of the existing road in sensitive riparian areas.

Provide a new trailhead with interpretive displays.

2.1.5 Scenic Overlook & Parking

Provide a new scenic overlook with grading, parking for 5 vehicles & 1 accessible vehicle, pervious surfacing and safety railing.

2.1.6 Maintenance Storage Area & Public Restroom

Provide a new maintenance storage building of approximately 650 square feet. The area will also have a visitor parking area with a 300 square foot accessible comfort station and additional parking with one accessible parking space. The total area to be developed is shown on Figures 2.C-4 and 2.9 and is approximately 5,650 square feet.

2.1.7 Intersection Modifications

Provide public intersection improvements to the satisfaction of the City of Chino Hills for upgrading the existing driveway entrance from Sapphire Road, including curb and gutter drainage.

2.2 CONSTRUCTION MANAGEMENT

The most effective and appropriate combination of resource avoidance and monitoring will be employed by California State Parks during all phases of project construction. Construction timeframe windows will be placed on the project to prevent disturbance of nesting birds and reduce potential impacts to the adjacent neighborhood, the City of Chino Hills water lines and storage facility, and users of the Chino Hills State Park.

Work hours within ¼ mile of the residential neighborhood shall not begin before 6:30 AM and shall cease by 7 PM, Monday through Friday. Work hours within ¼ mile of the residential neighborhood shall not begin before 8:00 AM and shall cease by 5 PM, on Saturdays, and there shall be no work on Sundays. Access by large, noisy equipment to the work site shall also be limited to the above hours. Primary staging for the project will not occur within ¼ mile of the residential neighborhood. Secondary staging for the first phase of construction may be required within ¼ mile of the residences, however, it will be avoided, if feasible, and of limited duration.

Access must be maintained to the City of Chino Hills water facilities and will be coordinated with the City of Chino Hills. Temporary closures may be necessary but must be coordinated with the approval of the City of Chino Hills Water & Sewer Division and Park operations.

Best Management Practices (BMPs) will be used to protect the resources on site and nearby for all phases of work activity. Environmentally Sensitive Areas will be fenced and avoided. Sediment control during construction will be implemented through a variety of erosion control features or construction BMPs identified as part of the comprehensive *Storm Water Pollution Prevention Plan* which will prevent or minimize the potential of sediment leaving the construction site. The major principles that will be incorporated into the erosion control and grading plans include: 1) minimizing the extent of the disturbed area and duration of exposure, 2) stabilizing and protecting the disturbed area as soon as possible, 3) keeping runoff velocities low, 4) protecting disturbed areas from contact with runoff, and 5) retaining sediment within the construction area. The construction BMPs that will be applied to the project may include: 1) temporary desilting basins, 2) silt fences, 3) gravel bag barriers, 4) temporary soil stabilization through mattress or mulching, 5) temporary drainage inlet protection, and 6) diversion dikes and interceptor swales.

The Stormwater and pollutants will be contained on site and/or evacuated offsite to an appropriate, approved facility. No pollutants or sediment will be allowed to enter Bane Canyon Creek and the adjacent riparian area. Disposal of potential pollutants will be conducted according to accepted protocols. Due to the sensitive nature of the nearby riparian areas and drainages and other natural resources, construction will be coordinated to reduce impacts whenever possible.

Additionally, the final site grading and construction plan must be approved by a qualified state resource ecologist prior to implementation of the project.

2.3 PROJECT ALTERNATIVES CONSIDERED

The following alternatives were considered during the planning process. Please see Figure 2.1. These alternatives were identified in the *July 2002 Final Concept Report for the Chino Hills State Park Entrance Road Alternatives Study* prepared by Psomas, an engineering and environmental consultant. Psomas originally prepared six conceptual alignment alternatives with two options for each of three corridor alternatives. The more feasible options were then chosen additional study. *The Final Concept Report* addressed

three alternatives, the Bane Canyon (similar to the Preferred Alternative), the Slaughter Canyon (the Environmentally Superior Alternative), and the Borba Alternative. Each of the alternatives was estimated with 12-foot lanes and 4-foot shoulders and a six-foot wide multi-purpose trail located 6 feet from the edge of pavement.

2.3.1 The Bane Canyon Alternative (Psomas)

This alternative was estimated to cost between \$14,063,000 and \$17,270,000 to construct and is very similar to the Preferred Alternative, beginning at the paved portion of the park entrance road and ending near the intersection of Sapphire Road and Elinvar Road. The primary difference between this Bane Canyon Alternative and the Preferred Alternative is the placement of the road in the canyon, the width of the road, and the increased design speed of 35 mph. This alternative is placed lower on the slope than the Preferred Alternative and has more direct and proximity impacts on the moderately sensitive biological habitats in Bane Canyon. Less than 2 acres of highly sensitive biological habitat would be affected. There are unstable slopes along the project length within the steep topography that will likely require retaining walls. This alternative would have the least visual impact of the alternatives studied.

2.3.2 The Slaughter Canyon Alternative

This Alternative was estimated to cost between \$14,070,000 and \$ 14,660,000 to construct. This alternative begins inside the park at the paved portion of the existing entrance road and travels in a northeasterly direction roughly following an existing trail through the canyon and up the ridge to the Park boundary. Then the road follows the ridgeline within private property toward Butterfield Ranch Road at Park Crest Drive. A 300-foot long bridge structure would be required and design speed would vary between 35 mph and 25 mph. This alternative also has unstable slopes that would require flattening back of slopes or retaining structures. An active fault, the Chino fault crosses this alternative. The Slaughter Canyon alternative follows the ridgeline and, therefore, requires the least amount of drainage. The Slaughter Canyon alternative has an impact of approximately 1 to 2 acres on highly sensitive habitat and species and the least impact on moderately sensitive habitats. Archaeological sites would be impacted but have not been determined to be significant. However, additional testing would be recommended should this alternative be chosen. Slaughter Canyon would have the highest visual impacts of the build alternatives. The road would require construction of a prominent fill slope that would be visible to park users, travelers on Butterfield Ranch Road and nearby residences. Please see Section 5.5.2 for additional detail.

This alternative crosses private property that does not have a willing seller. It is not California State Park's policy to pursue condemnation to acquire the property when there is an alternative on the existing road that provides access to the site.

2.3.3 Borba Ranch

This Alternative was estimated to cost between \$41,509,000 and \$ 46,649,000 to construct. This alternative begins inside the park at the paved portion of the existing

entrance road and travels near the existing entrance road adjacent to the riparian area up to Station 85+00. The alignment then moves northeasterly up a valley adjacent to an existing drainage. A tunnel of approximately 880 to 850 feet was proposed through the ridgeline, then, the roadway follows another drainage to Butterfield Ranch Road.

The roadway design speed would be 30 mph in some locations. The tunnel excavation would require substantial ground support due to the weak rocks and low cover. The approach cuts would be 30 to 40 feet high and this alternative also crosses the Chino Fault. The visual impacts, while less than the Slaughter Canyon alternative are greater than either of the Bane Canyon alternatives. Because of its mid-slope location, drainage structure would be required. Although the direct impacts to highly sensitive biological resources are less than 2 acres, the Borba Ranch alternative impacts large areas of moderately sensitive habitats that, because of their size, have a good probability of supporting a number of special status species. The Borba Ranch Alternative was dropped from further consideration due to its excessive cost and comparatively higher environmental effects.

3 ENVIRONMENTAL SETTING

3.1 LOCATION AND DESCRIPTION

Chino Hills State Park is within the Puente-Chino Hills, which are at the northern end of the Peninsular Ranges Geomorphic province. The Cleveland National Forest in the Santa Ana Mountains is located south of the park and connected through the recent park acquisition of the Coal Canyon biocorridor. State Route 91 bisects the main part of Chino Hills State Park from the Coal Canyon biocorridor. Because the park was historically used for cattle ranching, it is dominated by non-native annual grassland. However, the park retains important natural resource components of walnut woodlands, coastal sage scrub, coast live oak woodland, chaparral, and riparian vegetation, and supports abundant wildlife, including several rare species.

The center of Chino Hills State Park is ringed by hills with the nearby urban uses remaining largely unseen. However, several power lines bisect the park, reminding visitors of outside development and a series of existing trails and access roads also cross the park. Chino Hills State Park (CHSP) is an important natural area surrounded by heavily urbanized areas in southern California. The park consists of over 12,000 acres of grassy hills, sage scrub, oaks, and sycamore riparian zones in canyons.

The park ranges from the north end of the Santa Ana Mountains to the southeast of the Puente-Chino Hills. Chino Hills SP provides valuable habitat for a variety of animals and plant species and provides an essential link between natural areas supporting animal species in this region. More than 200 species of birds, mammals, reptiles and amphibians have been found within the park, including bobcats, coyotes, deer, and other animals. The natural areas provided within the State Park are vitally important for the survival of species surrounded by developed areas. Chino Hills SP is also a critical link in the Puente-Chino Hills biological corridor, providing natural areas for wildlife movement.

The proposed location for the Chino Hills Entrance Road is located in southwestern San Bernardino County, in the northeastern portion of the park. This portion of Chino Hills State Park is within the City of Chino Hills.

The City of Chino Hills was incorporated in 1991 with a population of 42,000. The City now encompasses 46 square miles and has a population of over 72,000. According to the 2000 United States Census, 85% of the homes are owner-occupied, 56% of the residents are white, 22 % are Asian, 5% are African American and 26% are Hispanic (Please note that Hispanic in Census data can be double counted as another race). The median household income is \$84,000 and the average household income is \$95,990. The largest employer in the City is the Chino Valley Unified School District with 800 employees followed by the Great Indoors and Boys Republic with 200 employees each. While largely a bedroom community, the City has substantially increased its retail and office/commercial land use in recent years. The Chino Valley Unified School District operates 10 elementary schools, two junior high schools and two high schools within the City of

Chino Hills. The closest schools to the project site are the Wickman Elementary School, located approximately $\frac{3}{4}$'s of a mile from the project and the Chino Hills High School and Los Serranos Elementary School, both located over a mile away from the project site.

Access to the project site is from Soquel Canyon Road, a major arterial, to a signalized intersection at Elinvar Drive. Elinvar Drive serves as a residential collector street with contemporary single-family homes located in two separate neighborhoods served by roads that intersect with Elinvar Drive. Sapphire Road intersects with Elinvar Drive near the park entrance. Traffic data for these roads (Please see Section 5.2.1 and Appendix C for additional detail) and indicates that existing traffic levels are very light and provide good levels of service. Although no homes front onto either Sapphire Road or Elinvar Drive in this location, homes fronting on Starstone/Argent Roads are located directly adjacent to Elinvar Drive and Sapphire Road. Across Soquel Canyon Road, there are equestrian facilities. Equestrians from these facilities access Chino Hills State Park directly from these facilities by crossing Soquel Canyon Road and traveling along Elinvar Drive. Additionally, park trail users often park their vehicles along Elinvar Drive or Sapphire Road to access the trails in Chino Hills State Park. The City of Chino Hills has a trail plan that incorporates access into Chino Hills State Park.

This portion of the park is located on the Prado Dam USGS 7.5-minute quadrangle. The entrance road in this location is steep and narrow as it ascends the canyon toward the City's 5 million gallon water storage facility. A portion of the entrance road crosses land owned by the City for its primary water storage facility and the City has an easement within the State Park property for the 30-inch waterline that provides both pressure and gravity flow. The proposed entrance road is approximately 2 miles long. The current Bane Canyon entrance road is an unimproved dirt road that provides access to the existing campground and the historic Rolling M Ranch site as well as the park's equestrian staging area and campground. A new campground and public day-use site began construction at the Rolling M Ranch in 2003 and is expected to open to the public in the Fall of 2004. The Bane Canyon area primarily consists of rolling grassy hills, patches of coastal sage scrub, and willow-sycamore riparian habitat.

3.2 NATURAL RESOURCES

General and sensitive biological resources that occur or potentially occur on the project on the project site at Chino Hills State Park are discussed in this section. This section includes specific information on the biological resources and potential impacts to park resources from the proposed entrance road project.

3.2.1 Methods

The biological investigation for this EIR included field surveys, a review of previously conducted studies in the vicinity of the project site, and a search of existing biological databases and inventories. Studies and databases consulted during the preparation of this preport include the following: Chino Hills State Park General Plan, CalParks Flora and CalParks Fauna Biological Inventory databases, California Native Plant Society (CNPS)

Electronic Inventory, California Natural Diversity database (CNDDB) and the California Wildlife Habitat Relationships (CWHR) database.

A Concept Report, including a Biological Resource Sensitivity Evaluation (Psomas 2002) with field surveys was conducted in April and May of 2002. DPR ecologists visited the proposed project area in April, May, June, July, and November of 2003 and March and April of 2004 to conduct surveys for biological resources in the project site. Additional biological data was reviewed from a comprehensive study of Chino Hills State Park through the Inventory, Monitoring, and Assessment Program (IMAP) conducted by DPR ecologists in 2001 (DPR 2002).

3.2.2 Vegetation and Wildlife

The proposed project area occurs in the northeastern portion of Chino Hills State Park. This area includes the present unpaved Bane Canyon Road, ending at a primitive campground area and Rolling M Ranch. This area is mostly undeveloped and consists of several natural communities. The road area primarily consists of rolling grassy hills, patches of coastal sage scrub, and willow-sycamore riparian zones at the canyon bottom. The riparian zones in Bane Canyon provide habitat for a number of special-status species, and the canyon provides a connection to high-quality habitat in Aliso Canyon and the Rolling M Ranch.

Chino Hills State Park is located within the Puente-Chino Hills, at the northern end of the Peninsular Ranges Geomorphic province. The Puente-Chino Hills Wildlife Corridor has been designated a Hot Spot of biodiversity (second only to tropical rainforests), among only 20 that have been designated worldwide (Hills for Everyone 1994). Studies have identified important habitat linkages within the Chino-Puente Hills area, seasonal changes in wildlife movement, and the effects of urban development on wildlife movement. The Bane Canyon project area is located to the east of the main portion of the Chino-Puente Hills corridor. However, Bane Canyon leads directly into Aliso Canyon, which is an important wildlife area within the corridor.

3.2.2.1 Vegetation

The proposed project area includes seven different vegetation communities (Holland 1986, Sawyer and Keeler-Wolf 1995). Vegetation types present in the proposed project area include southern willow scrub, sycamore woodland, tamarisk scrub, mulefat scrub, and Mexican elderberry along Bane Canyon Creek. In addition, patches of coastal sage scrub vegetation are found on hills, and annual grassland occupies the rest of the project zone away from Bane Canyon Creek. Developed areas within the proposed project zone include Bane Canyon road and other park infrastructure. Coastal sage scrub and southern willow scrub communities are considered sensitive and worthy of protection by the California Natural Diversity Database (2004) and regional conservation plans due to rapid habitat loss in the region. Natural communities found in the proposed Bane Canyon project area are described below (Smith 2003).

Southern willow scrub is composed of black willow (*Salix gooddingii* var. *gooddingii*), arroyo willow (*Salix lasiolepis*), and mixed stands including red willow (*S. laevigata*). Narrow-leaf willow (*Salix exigua*) is also present. The understory consists of of mulefat (*Baccharis salicifolia*), milk thistle (*Silybum marianum*), poison hemlock (*Conium maculatum*), and California mugwort (*Artemisia douglasiana*).

Sycamore woodlands in the project area contain moderately dense stands of sycamore (*Platanus racemosa*), with sparse cover of black willow, arroyo willow, and mulefat. Native and exotic understory species include ripgut grass (*Bromus diandrus*), mugwort (*Artemisia douglasiana*), poison hemlock (*Conium maculatum*), black mustard (*Brassica nigra*) and willow herb (*Epilobium ciliatum*).

Mulefat scrub consisted of mulefat (*Baccharis salicifolia*) and associated species including California mugwort and rushes (*Juncus* sp.)

Mexican elderberry consisted of individual or clustered Mexican elderberry (*Sambucus mexicana*) trees.

Tamarisk scrub consisted primarily of monotypic stands of saltcedar (*Tamarix ramossissima*).

Coastal sage scrub occurred in small patches on hills within the project area. These patches were often composed of monotypic stands of California buckwheat (*Eriogonum fasciculatum*) or coastal sagebrush (*Artemisia californica*) with small stands of white sage (*Salvia apiana*). Others stands were mixed and contained both natives and exotics, including telegraph weed (*Heterotheca grandiflora*), tocalote (*Centaurea melitensis*), California poppy (*Eschscholzia californica*), fascicled tarplant (*Deinandra fasciculata*), ripgut grass (*Bromus diandrus*), wild oat (*Avena barbata*), and twiggy wreath plant (*Stephanomeria virgata*).

Nonnative annual grassland vegetation occurs in nearly all the Bane Canyon area excepting the riparian corridors along Bane Canyon Creek. Annual grasslands here consisted of both exotic weedy dicots and European annual grasses. Black mustard (*Brassica nigra*), fascicled tarplant (*Deinandra fasciculata*), tocalote (*Centaurea melitensis*) and Italian thistle (*Carduus pycnocephalus*) dominate much of this vegetation. In addition, ripgut grass (*Bromus diandrus*), wild oat (*Avena fatua*), and other annual grasses are commonly found. Native forbs such as California poppy (*Eschscholzia californica*), blue dicks (*Dichelostemma capitata*), and telegraph weed (*Heterotheca grandiflora*) were scattered in the project area.

3.2.2.2 Wildlife

Wildlife in and around the project site is diverse and relatively abundant. Riparian zones near Bane Canyon Creek and coastal sage scrub offer foraging habitat for a variety of species. Riparian vegetation provides a diversity of habitat that offers foraging and nesting habitat for a number of sensitive and more common bird species, and a number of reptiles and amphibians are associated with these riparian zones. Coastal sage

scrub may provide important habitat for declining sensitive wildlife species such as the coastal California gnatcatcher.

3.2.3 Special Status Biological Resources

Special-status biological resources include animals and plants that have been given special recognition by federal, state, or local resource agencies and organizations. Habitats that are of relatively limited distribution or are of particular value to wildlife are also included. Sources used to determine the current state and federal status of these resources are:

Plants - CDFG (2004), CNDDDB (2004) and California Native Plant Society (2004)

Wildlife - CDFG (2004), CNDDDB (2004)

Habitats - (CNDDDB 2004)

3.2.3.1 Regulatory Background

The project area includes biological resources that are protected and/or regulated by laws and policies. Prior to project implementation, it would be necessary for the proposed project to be in compliance with these regulations described below.

Required permits would include a Section 1602 Streambed Alteration Agreement from the California Department of Fish and Game, and a Clean Water Act Section 401 Water Quality Permit from the Regional Water Quality Control Board. A Nationwide Permit under Section 404 of the Clean Water Act should be obtained from the U.S. Army Corps of Engineers (ACOE). Informal consultations have been initiated with the U.S. Fish and Wildlife Service (2004), and it appears that recommended avoidance measures would be considered sufficient to protect federally listed species including the Least Bell's Vireo. If modifications to the project footprint or timing of construction would cause direct impacts to this species, a formal consultation under Section 7 of the Endangered Species Act (ESA) would be required.

3.2.3.1.1 Federal Endangered Species Act

Pursuant to the federal Endangered Species Act (ESA), the USFWS has regulatory authority over projects that may result in the take of a federally listed species. Take is defined in Section 9 of ESA as killing, harming, or harassment. Under federal regulation, take is further defined to include habitat modification or degradation where it actually results in death or injury to wildlife by significantly impairing essential behavior patterns including breeding, feeding, or sheltering.

3.2.3.1.2 California Endangered Species Act

Pursuant to the California Endangered Species Act (ESA), a permit from CDFG is required for project that could result in the take of a state-listed Threatened or Endangered Species. A take of a species, under ESA, is defined as an activity that would directly or indirectly kill an individual of a species, rather than also including "harm" or

“harass” as included under ESA. As a result, the threshold for take under CESA is higher than under ESA. The state has the authority to issue an incidental take permit under Section 2081 of the Fish and Game Code.

3.2.3.1.3 Wetlands, Riparian, and other Jurisdictional Waters of the U.S.

Waters of the United States include areas of federal jurisdiction under Section 404 of the Clean Water Act (CWA). Section 404 CWA requires that a permit be obtained prior to any activity that involves discharge of dredged or fill material into Waters of the U.S., including wetlands. In general, if fill to be placed in Waters of the U.S. is limited to an area of less than ½ acre, such fill could occur through a USACE Nationwide Permit (NWP) program. USACE districts use NWPs to authorize categories of activities with minimal effects on the aquatic environment. When the proposed project exceeds more than ½ acre, an individual permit may be required. This process is typically longer and more complicated than the NWP process.

Riparian habitat (i.e. the land and plants bordering a watercourse or stream within the ordinary high water mark of jurisdictional Waters of the U.S.) is under regulatory authority of the U.S. Army Corps of Engineers (USACE). Riparian vegetation associated with rivers, streams, or lakes in California is also subject to regulation by the California Department of Fish and Game (CDFG). These regulations are described in Sections 1600 through 1607 of the California Fish and Game Code, and cover alterations to the natural flow, bed, channel, or bank of any river, stream, or lake. A Streambed Alteration Agreement must be obtained for any project that would alter a river, stream, or lake.

3.2.3.1.4 Special-status Species

For the purposes of this EIR, special-status species are defined as plants and animals that are legally protected or that are otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. Special-status species include those species that are listed as threatened or endangered or are proposed for listing under the federal Endangered Species Act or the California Endangered Species Act; identified as species of concern by the USFWS or the California Department of Fish and Game; wildlife designated as fully protected by the California Department of Fish and Game; and plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered. Special-status species that are not federally or state listed as threatened or endangered do not receive protection under ESA or CESA, however, impacts to these species could be considered significant under CEQA.

Through onsite surveys, review of natural resource data, and searches of the CNDDB, CWHR and CNPS electronic inventories, several special status plant and wildlife species were identified as potentially occurring onsite. The Prado Dam USGS 7.5-minute quadrangle, and USFWS list of species for San Bernardino County was investigated for this project area.

3.2.3.1.5 Special-status Plants

There are seven special-status plant species that are listed by the California Natural Diversity Database (CNDDDB 2004) and California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (2001) as occurring on the Prado Dam 7.5-minute USGS quadrangle. These are: the chaparral sand-verbena (*Abronia villosa* var. *aurita*), Coulter's saltbush (*Atriplex coulteri*), Salt Spring checkerbloom (*Sidalcea neomexicana*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), intermediate Mariposa lily (*Calochortus weedii* var. *intermedius*), Catalina Mariposa lily (*Calochortus catalinae*) and the many-stemmed dudleya (*Dudleya multicaulis*) (See Table 3, Appendix B). Of these, only the many-stemmed dudleya, intermediate Mariposa lily, Catalina Mariposa lily and chaparral sand-verbena have limited potential to occur in the project area (DPR 2002, Psomas 2002).

Catalina Mariposa lily (*Calochortus catalinae*). Catalina Mariposa lily is a CNPS List 4 (plants of limited distribution, a watch list) herb that has been found in Slaughter canyon and on Bane Canyon Ridge. There is no potential for the project to impact this species in the proposed Bane Canyon project area.

Chaparral sand-verbena (*Abronia villosa* var. *aurita*). The chaparral sand-verbena (CNPS List 1B) occurs in Santa Ana Canyon, and favors coastal sage scrub with open sandy soils. While there is a limited amount of marginally suitable habitat within the proposed project area, this plant has never been found there. The project would have no potential to impact this species.

Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*). This is a CNPS List 1B (rare, threatened, or endangered in California and elsewhere) species that may occur in annual grassland communities, and is found during years of higher rainfall (Psomas 2002). This species was not found in the Bane Canyon area in 2002 and 2003 and the proposed project would have no potential to impact this species.

Many-stemmed dudleya (*Dudleya multicaulis*). Many-stemmed dudleya is a Federal Species of Concern, CNPS list 1B species. This perennial species is found within chaparral, coastal sage scrub, and grassland habitats (CNPS 2004). It blooms in late spring and summer, and may be found up to 790 m in elevation. Its existence is threatened by development, road construction, grazing, and recreation. No individuals of this species were found during surveys in 2002 and 2003 in the proposed project area. Due to the absence of this species, there are no impacts expected from this project.

3.2.3.1.6 Special-status Wildlife

Twenty-five special-status wildlife species are listed by the CNDDDB (2004) or reported from other sources as occurring on the Prado Dam USGS 7.5-minute quadrangle. Three birds, the coastal California gnatcatcher, southwestern willow flycatcher, and least Bell's vireo are listed as threatened or endangered (Miner and Smith 2002). Suitable habitat exists within the proposed project area for the species described below.

Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*). The orange-throated whiptail is a California Species of Special Concern and a Fully Protected Species. It inhabits low-elevation coastal scrub, and mixed chaparral habitats. They are active diurnally. There is potential for this species to be found in Bane Canyon as a limited amount of suitable habitat exists, however it has not been documented there. There is little potential for this project to impact this species.

Western spadefoot toad (*Spea hammondi*). The western spadefoot toad is a Federal Species of Concern and a California Species of Special Concern. Historically, the western spadefoot ranged from Redding to northwestern Baja California but has been extirpated from many locations within its native range. Western spadefoot toads inhabit coastal sage scrub (CSS), grassland, chaparral and grassland habitat. These may also include vernal pools or ephemeral stream courses and riparian habitats. Western spadefoot toads aestivate in burrows that may descend to one meter in depth in upland habitats which are adjacent to suitable breeding sites. Adults typically stay close to their breeding pool during the year (Peregrin 2004).

Spadefoot toads are active especially after periods of warm rains, and may form large groups of animals immediately following a period of rain (Dudek & Associates 2003). This typically occurs in the spring but can also occur during the fall. They utilize habitat near the riparian corridor in Bane Canyon, and may be found near pools after a rainstorm, especially in warm spring weather. The spadefoot breeding season is typically from January to May, and occurs in temporary pools with water temperatures between 48° and 68° F. Development of young typically may take from 3 to 11 weeks, but is dependent on temperature (Dudek & Associates 2003, Peregrin 2004).

Specific toad surveys conducted in 2001 to 2004 in Chino Hills State Park along the existing Bane Canyon Road found four separate occurrences of spadefoot toads there. The observations were documented south of the kiosk to the point where pavement currently begins. These individuals were located on the existing dirt road, in the creek channel, and in the man-made pond to the east of Bane Canyon Road (Peregrin 2004). Impacts to this species would potentially occur during project excavation, grading, and construction.

Coast patch-nosed snake (*Salvadora hexalepis virgulata*). The coast patch-nosed snake is a California Species of Special Concern. It is found in coastal chaparral, desert scrub, washes, sandy flats and rocky areas. They are active diurnally. A limited amount of suitable habitat exists in Bane Canyon, however, this species has never been documented in this area. There is little potential for this project to impact this species.

Southwestern pond turtle (*Clemmys marmorata pallida*) is a Federal Species of Concern and a California Species of Special Concern. Southwestern pond turtles are normally associated with permanent ponds, lakes, and streams or permanent pools along intermittent streams. They prefer sites with dense emergent vegetation. They also utilize upland nesting sites near aquatic sites. Southwestern pond turtles have been found in Aliso Canyon below Bane Canyon to the Santa Ana River (CNDDB 2004), however,

none have been found in the project area. There is limited suitable habitat in the project area for this species, and little potential for the project to impact this species.

Two-striped garter snake (*Thamnophis hammondi*) is a California Species of Special Concern and a Fully Protected species. This is an aquatic species is associated with perennial and intermittent streams that have rocky beds and dense riparian vegetation. It is typically associated with streams that are bordered by willow thickets or other dense riparian growth. It can also be found in association with ponds, lakes, and wetlands. This snake uses small mammal burrows for overwintering. There is low to moderate potential for this species to be found in Bane Canyon.

Golden eagle (*Aquila chrysaetos*). Golden eagles are protected by the federal Bald and Golden Eagle Protection Act, and are California Species of Special Concern and Fully Protected Species. They may frequent rolling hills and other open terrain for hunting, and typically nest in cliffs. Golden eagles have been observed foraging in Bane Canyon. However, no suitable nesting habitat exists there. Project activities would not affect nesting golden eagles, and there is no potential for the project to impact this species.

Cooper's hawk (*Accipiter cooperi*). Cooper's hawk, a California Species of Special Concern, have been observed in the Bane Canyon area. They may use the large sycamore trees in the canyon for perching, foraging and nesting. Breeding season takes place March through August. There is potential for this project to impact this species during nesting season, and indirect impacts could result due to loss of habitat.

White-tailed kite (*Elanus leucurus*) is a Federal Species of Concern and California Fully Protected Species. They are found in herbaceous and open habitats, including lowland grasslands, wetlands, and riparian zones associated with open areas. They may nest in dense tree stands, located near an open foraging area. Breeding occurs from February to October (Zeiner et al. 1990). White-tailed kited have been observed foraging in Bane Canyon and may nest there. There is potential for this species to be impacted during construction within the nesting season, and indirect impacts could result due to loss of habitat.

Burrowing owl (*Athene cunicularia hypugea*) is a California Species of Special Concern. They favor burrows in open, dry grasslands, and may use rodent or other burrows for cover. Little suitable habitat exists within Bane Canyon that would support burrowing owls, and no burrowing owls have been sighted in this area. There is no potential for this project to impact burrowing owls in Bane Canyon.

Long-eared owl (*Asio otus*) is a California Species of Special Concern. Long-eared owls prefer riparian habitat, live oak thickets, and other dense stands of trees (Zeiner et al. 1990). Breeding occurs from March to late July. Long-eared owls have been sighted near Carbon Canyon, however they have not been recorded within Bane Canyon. Suitable habitat exists for this species within Bane Canyon. However, there is little potential that they could be affected during the breeding season by project activities, since they do not appear to be breeding in Bane Canyon. There is potential for indirect impacts due to loss of habitat.

Coastal California gnatcatcher (*Polioptila californica californica*). The Federally Endangered (California Species of Special Concern) coastal California gnatcatcher is found within coastal sage scrub vegetation in southern California. The coastal California gnatcatcher is found as a locally uncommon obligate, permanent resident of coastal sage scrub, below 1500 feet. It requires shrubs for roosting and nesting cover, and is found most commonly on low, dense coastal scrub habitat, in arid washes, and slopes of coastal hills. It is found most commonly in patches of California buckwheat, California sagebrush, and prickly pear. Gnatcatchers may additionally use habitats other than CSS for dispersal. Dispersal of juveniles requires a corridor of native vegetation to link to suitable patches of CSS (Zeiner et al 1990). The gnatcatcher is threatened due to habitat loss and fragmentation in southern California. In addition, they are impacted by brood parasitism by brown-headed cowbirds, which have contributed to the species decline in addition to habitat loss and fragmentation.

Coastal sage scrub (CSS) habitat exists in Bane Canyon, however the habitat quality for California gnatcatchers is marginal. The CSS in Bane Canyon occurs in very small patches, with little species diversity. No California gnatcatchers have been observed in Bane Canyon during yearly surveys. There is little potential to direct impacts to California gnatcatchers from this project since they appear to be absent from the area. Indirect impacts could result to gnatcatchers due to loss of habitat.

Grasshopper sparrow (*Ammodramus savannarum*) is listed with the US Fish and Wildlife Service MNBMC (Migratory Nongame Birds of Management Concern). Grasshopper sparrows have been found in the project area (Miner and Smith 2001). Grasshopper sparrows prefer grasslands, open areas, and patchy bare ground (Dudek and Associates 2003). Direct impacts to grasshopper sparrows could result from project construction and grading. .

Horned lark *Eremophila alpestris* is a California Species of Special Concern. Horned larks are found within Chino Hills State Park. Horned larks may be found in a variety of habitats ranging from grasslands and shrublands to residential areas. In some areas, it may be a common to abundant resident (Dudek and Associates 2003). Impacts to horned larks may result from project construction and grading.

Southern California rufous-crowned sparrow *Aimophila ruficeps canescens* is a Federal Species of Concer and a California Species of Special Concern. Rufous-crowned sparrows have been observed within Bane Canyon (Psomas 2002). These birds may be found in grasslands, chaparral, and shrublands, predominantly associated with low shrubs and grassy areas ((Dudek and Associates 2003). Impacts to southern California rufous-crowned sparrow could result from project grading and construction.

California thrasher (*Toxostoma redivivum*) are a Federal Species of Concern and are found on the Audubon watch list. The California thrasher prefers the cover of chaparral or thickets in riparian habitats. They avoid dense tree canopies. Thrashers feed primarily on the ground, and are usually found within a few feet of shrub cover. Nests may be in large shrubs or scrubby trees (Zeiner et al 1990). California thrashers have

been observed foraging in Bane Canyon and Aliso Creek (Shafer 2004). No nests have been observed, but suitable nesting habitat exists within the project area. The project has potential to impact California thrashers that may be nesting in Bane Canyon.

Least Bell's vireo (*Vireo bellii pusillus*) is a Federally Endangered and California Endangered species. Least Bell's vireo (LBV) is migratory and nests in southern California riparian habitat, and winters in Mexico. This species is a summer resident of cottonwood-willow forests, oak woodlands, shrubs, and may also be found in willow thickets. It may often be found in riparian habitats, dominated by willows with dense understory vegetation. The LBV is mainly an insectivore, and prefers willows for nesting and foraging. Nests tend to be found near the edge of thickets, three feet about the ground. Males return to the same nest in successive years, and therefore are sensitive to changes in riparian vegetation.

LBV breeding range in southern California is found in Riverside, San Diego, Santa Barbara, Ventura counties and in northern Baja California. The LBV has been impacted by loss and degradation of habitat throughout its breeding range in southern California. It is also impacted by human activities, and is additionally affected by nest parasitism by the brown-headed cowbird. Habitat has also been threatened and lost by human activities, weed encroachment, and agricultural activities.

In Chino Hills State Park, LBV has been found in Aliso Canyon and the Rolling M Ranch Area during yearly USFWS protocol surveys (Smith 2003, Shafer 2004). A program exists here to trap and remove brown-headed cowbirds (Shafer 2004). In lower Bane Canyon, a solitary male LBV was observed foraging in 2001. However, no LBV were found in Bane Canyon during protocol surveys in 2003 -2004. This project has little potential to impact LBV, since they appear to be absent from the project area. The project could affect LBV if they return to Bane Canyon or nest there. Construction of this project would result in indirect impacts to habitat which supports LBV.

Willow flycatcher (*Empidonax traillii*) is a California Endangered species. Willow flycatchers prefer dense low willow thickets in riparian habitats, near ponds or wet meadows for both nesting and roosting. They have been observed in the Santa Ana River (CNDDDB 2004), however none have been found in the project area. The habitat that exists in Bane Canyon is marginal for this species, and none have been observed there during surveys. There is little or no potential for the project to impact willow flycatchers – some habitat exists but birds have not been found foraging or nesting in the project area. Indirect impacts would result from impacts to suitable willow flycatcher habitat.

Southwestern willow flycatcher (*Empidonax trailli extimusi*) The southwestern willow flycatchers is a state Endangered species and was listed as federally Endangered in 1995. Southwest willow flycatchers use dense willow thickets for nesting and perching, and use low, exposed willow branches for singing and perching. They may be uncommon summer residents in wet meadows and broad, open river valleys, and may be migrants in spring and fall in lower elevations. Breeding populations now exist only in isolated areas

in southern California. Riparian habitat loss has been the primary threat to willow flycatcher, and has contributed to the species' decline. In addition, heavy grazing in willow scrub has affected habitat, in particular removing the favored lower branches of shrubs. Finally, parasitism by brown-headed cowbirds has also contributed to the species' decline.

Habitat exists for Southwestern willow flycatchers in Bane Canyon, however the habitat quality for flycatchers is marginal. Southwest willow flycatchers also breed in the Prado Dam area. No southwest willow flycatchers were found in the project area during surveys in 2003. However, a southwestern willow flycatcher was observed near the Chino Hills Primitive campground (approximately 1600 feet from the southern end of the project site) on 06/09/03 (Smith 2003). No southwestern willow flycatchers were observed nesting in the project area. There is small potential for this project to impact willow flycatchers, if they are found nesting in Bane Canyon. Indirect impacts would result from habitat loss.

Yellow-breasted chat (*Icteria virens*) California Species of Special Concern. The yellow-breasted chat was a historically a common summer resident throughout California, but populations have been reduced due to habitat loss. They may prefer foothill riparian zones, in brushy thickets near water. They require dense riparian thickets of willows, vines, and dense brush associated with streams and small ponds, and may use taller trees for song perches. Their nests are found two to eight feet above ground in dense shrubs along streams or rivers (Zeiner et. al. 1990). Yellow-breasted chats breed from May into early August, with peak activity in June. The species has declined both as a result of the loss of riparian woodland in southern California, and most likely due to brown-headed cowbird parasitism.

Yellow-breasted chats were observed in lower Bane Canyon in 2001, but have not been observed in surveys conducted after that time (Miner and Smith 2002). They have not been recorded breeding in the area, however suitable habitat exists. Yellow-breasted chats have been observed frequently in the Rolling M Ranch area nearby. There is limited potential for this project to impact yellow-breasted chats, if they are breeding in Bane Canyon. Indirect impacts would result from habitat loss and fragmentation.

Yellow warbler (*Dendroica petichia brewsteri*) California Species of Special Concern. Yellow warblers breed in southern California in summer, typically below 2500 feet. Yellow warblers were once common to locally abundant summer residents in riparian areas throughout California. The warbler breeds in riparian woodland. Warblers prefer woodlands with medium-density brush understory, and may be found during migration in sparse to dense woodland or forest habitats. They most commonly nest in deciduous, open willow-cottonwood riparian communities; other riparian species such as alder may be common. (Zeiner et. al. 1990). Yellow warblers require riparian thickets of willow and other brush near watercourses for cover. Yellow warblers breed from mid-April into early August, and peak activity occurs in June. The number of breeding pairs have declined in many lowland areas on the southern California coast and interior valleys, and are now rare where they were formerly common.

Most of the population today has been reduced and possibly extirpated due to loss of riparian habitat. The species has also been seriously impacted by brown-headed cowbird parasitism. Yellow warblers may also be impacted by predation by accipiters and corvids, small mammals and snakes.

Yellow warblers were found in lower Bane Canyon during surveys in 2001 (Miner and Smith 2002), and they frequent the nearby Rolling M Ranch area. They have not been observed breeding in Bane Canyon. There is potential for this project to impact yellow warblers during construction if they are breeding in the area. Indirect impacts will result from fragmentation and removal of habitat.

Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The western yellow-billed cuckoo is a California Endangered species. They are summer residents of riparian habitats, and prefer dense foliage in deciduous trees and shrubs, especially willows and cottonwoods. They prefer to nest in hidden horizontal branches of willows. Cuckoos are threatened by habitat loss and degradation in riparian habitat due to development, OHV's, livestock grazing, and exotic weed competition (DFG 2000).

Cuckoos have not been observed in Chino Hills State Park, however they have been found breeding in high-quality riparian habitat in Prado Dam. Marginal habitat exists for cuckoos in Bane Canyon, but they have never been observed there. The project has no potential to affect western yellow-billed cuckoos.

Bat species: **Yuma myotis** (*Myotis yumanensis*) and the **western mastiff bat** (*Eumops perotis*) are both Federal Species of Concern and California Species of Special Concern and the **pallid bat** (*Antrozous pallidus*) and **California mastiff bat** (*Eumops perotis californicus*) are California Species of Special Concern. Pallid bats may be found in grasslands, shrublands and woodlands and prefers rocky areas for roosting. They may also roost in hollow trees and caves. They are usually year-round residents (Zeiner et. al. 1990). The western mastiff bat may also occur in woodlands, scrubs, and grasslands. The project area provides potential roosting habitat in mature sycamores. Pocketed free-tailed bats have been detected in Bane Canyon, and they roost in cliffs (Miner 2004). There are few records of pocketed free-tailed bats within the state (DFG 1986). Yuma myotis tend to roost on bridges and buildings.

Several bat species were detected via Anabat recordings in Bane Canyon during surveys in 2002 (Miner 2002). These include the Yuma myotis and the pocketed free-tailed bat. Breeding season may extend from April through August or September. This project has the potential to affect bat species during roosting.

3.2.3.1.7 Sensitive Natural Communities

Sensitive natural communities are those that are regionally uncommon, unusually diverse, or of special concern to local, state, and federal agencies. Elimination or substantial degradation of these communities would constitute a significant impact under CEQA.

The CNDDDB query (2004) lists southern California arroyo chub/Santa Ana sucker stream, southern cottonwood-willow riparian forest, southern sycamore-alder riparian forest, southern willow scrub, and California walnut woodland as sensitive plant communities that exist within the Prado Dam USGS quadrangle. Of these, only southern willow scrub and sycamore woodlands exist within the project area. The remaining natural communities exist within Chino Hills State Park but are not represented within the proposed project area.

In addition, coastal sage scrub is considered a sensitive natural community in southern California. DFG has designated a Natural Communities Conservation Program (NCCP) in order to protect and conserve coastal sage scrub. DPR has signed a Memorandum of Agreement (MOA) with DFG, and the park's inclusion in the NCCP program indicates that management of this habitat within the park should be consistent with NCCP goals (DPR 1999).

Jurisdictional Wetlands and Waters of the United States. USACE defines wetlands as areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The majority of USACE jurisdictional wetlands meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology.

Within the project area, wetlands that meet U.S. Army Corps of Engineers (USACE) wetland criteria are found associated with Bane Canyon Creek. Surveys mapped approximately 0.13 acres of wetlands associated with the creek. The project was designed to avoid wetland habitat as much as possible. However, some wetlands will be impacted by this project's construction.

Riparian habitat associated with rivers, streams, or lakes in California is subject to regulation by the California Department of Fish and Game. Approximately 0.17 acres of riparian habitat along Bane Canyon Creek was mapped in the general project area. This habitat provides foraging and nesting habitat for a number of sensitive bird species. Construction of this project would result in some impacts to riparian habitat. A Streambed Alteration Agreement would be required for impacts within this habitat.

The riparian corridor in Bane Canyon also provides a valuable biological link directly to Aliso Canyon and the Rolling M Ranch area, which is an important wildlife area within the park. Therefore, project activities may indirectly affect the biological corridor and wildlife movement due to the project's proximity to the Aliso Canyon area.

Southern willow scrub. Southern willow scrub is common in Bane Creek Canyon and provides essential habitat for species which utilize riparian vegetation. It may provide habitat for a number of sensitive bird species including the southwestern willow flycatcher and least Bell's vireo. In Bane Canyon, this vegetation community is composed of a number of mixed willow species including black willow, arroyo willow, and red willow. The understory includes common natives such as mulefat and mugwort,

and exotics such as poison hemlock. Approximately 10.6 acres of willow scrub habitat were mapped in the Bane Canyon project study area.

California Sycamore series. Sycamore woodlands within the project area are synonymous with the description of southern sycamore-alder riparian forest as described by the CNDDB, and are considered a sensitive resource. This community provides valuable wildlife habitat for numerous common and sensitive wildlife species in the area. 5.41 acres of sycamore woodlands were mapped within the project area.

Coastal sage scrub Coastal sage scrub has declined rapidly in southern California and has been impacted by rapidly expanding development. This vegetation type is important for the survival of several wildlife species, including the Federally Threatened coastal California gnatcatcher. In Bane Canyon, this community type is represented by patchy stands of California buckwheat and California sagebrush with small stands of white sage. Mixed stands include both native and exotic forbs. The habitat in Bane Canyon is considered marginal and no sensitive species have been documented foraging there. 7.43 acres of coastal sage scrub were mapped within the Bane Canyon project area.

3.3 GEOLOGIC SETTING

The project site is located in the eastern portion of the Chino Hills. The Puente/Chino Hills are in a transitional area, between the Peninsular Ranges Physiographic Province to the south and the Transverse Ranges Physiographic Province to the north. The majority of the area is underlain by the Sycamore Canyon member of the Miocene age Puente Formation. The Sycamore Canyon member consists of brown to light yellow brown or light gray siltstone, fine to medium grain sandstone and pebble conglomerates. These rocks are very weak to weak and should be rippable with heavy grading equipment. Although less prone to landslide than other members of the Puente Formation, the slopes can be unstable and require careful design, depending on the orientation of the rock's discontinuities relative to the orientation of the slopes. Along Bane Canyon, are the largest and most abundant existing landslides of the alternatives studied. Shallow surface slumps may occur locally on all the project alignments where colluvial soil becomes thick.

Potential geologic hazards in the site area include surface fault rupture, seismic shaking, seismically induced settlement, landslides, seismically induced flooding, and erosion. Southern California is an active area for seismic activity. The closest mapped active regional source faults are the Chino and Whittier faults. The Whittier Fault is located about 2 miles southwest of the southern end of the Bane Canyon (Preferred) alternatives and the Chino Fault crosses the Slaughter Canyon (Environmentally Superior) alternative. A fault crosses the northern part of Bane Canyon near the existing water tank. The City of Chino Hill's 5 million gallon reservoir may provide the potential for seismically induced flooding. However, if adequately designed and constructed, this tank should be able to retain or at least limit discharge of water in the event of damage due to severe seismic shaking. The majority of the soils and rock at the project site should be considered susceptible to erosion.

3.4 PALEONTOLOGY

Paleontology is a biologic and geologic scientific discipline involving the study of fossils. Despite the tremendous volume of sedimentary rock deposits preserved world-wide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of their rarity, and because of the scientific information they provide, fossils can be highly significant records of ancient life. Significant paleontological resources are determined to be fossils or assemblages of fossils which are unique, unusual, rare, uncommon, diagnostically or stratigraphically important and/or those which add to an existing body of knowledge in specific areas – stratigraphically, taxonomically, and/or regionally.

The Sycamore Canyon Member of the Puente Formation is the uppermost and youngest of the Miocene sediments in the Puente Hills. Several thousand specimens have been exposed and recovered from the Sycamore Canyon Member in this region, representing a minimum of 62 identified taxa of microfossil invertebrates and megafossil vertebrates, invertebrates, plants, and marine algae. Taxa identified include whales, bird, marine turtle, shark, bony fishes, terrestrial leaves, wood, reeds, and seaweeds. Pleistocene older alluvium may also be present within the boundaries of the project site. If present, this Pleistocene alluvium has high potential to contain significant nonrenewable alluvial sediments. Similar sediments throughout the Inland Empire, have been reported to yield significant fossils of extinct plants and animals from the Ice Age, including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, sabre-toothed cats, large and small horses, large and small camels, and bison.

Miocene fossils have been discovered in twelve sites within a few miles of the project area and Pleistocene fossils approximately 3.5 miles to the northeast. The on-site survey confirmed that the project site contains sediments that resemble similar Sycamore Canyon Member paleontological sites. Fossil wood fragments were identified during the survey.

3.5 AESTHETICS

The eastern end of Chino Hills State Park can be characterized as a mostly non-native annual grassland which covers rolling hills interspersed with steep topography and riparian corridors. The topography of the area is the most visually powerful element in this end of the park, particularly in the early morning or late afternoon when shading shadows accentuate the landform. The ridgelines adjacent to the Park's canyons are important to the visual character of the park since they visually contain views and create a sense of seclusion and separation from the urban boundaries. The appearance of the hillsides is fairly uniform with the exception of utility and road/trail scars. Woodland associations include California walnut groves and sycamore/willow riparian growth along drainages or north-facing hillsides. The trees are visual accents because of their dark contrast with the grasses and the variety of textures and vertical forms that can be seen from a distance.

The Park entrance varies from the park interior because it is located on the edge of a contemporary urban residential neighborhood. The homes face away from the Park entrance and there is very little interface between the urban and park elements. The view of the park from these homes is limited by the steep topography and adversely affected by a large power line located just east of the entrance road. Existing park users contribute to the visual blight by parking their vehicles outside the Park boundary along Sapphire Road and Elinvar Drive and sometimes leaving trash or making noise.

3.6 HISTORIC BACKGROUND & DESCRIPTION

Historic Use of Bane Canyon Road

Bane Canyon appears to have been used as a minor transportation corridor moving people, goods, and livestock through the area now known as Chino Hills State Park as early as 1860 (or earlier). Documentary evidence reveals that it played a major role in the operation of the historic Pellissier/Rolling M Ranch complex during its 1921-1950 period of historic significance. While it may be argued that the route may be potentially historic, the roadbed itself, is not. Alterations and improvements made after the historic period have diminished its historic integrity. Therefore, the planned road improvements would not have an adverse effect on a historic resource.

Prior to an archival investigation of the roads history, an SSC staff historian conducted a field survey of the road, from the park entrance off Elinvar Road to a point near the primitive campground and the McLean Overlook road junction. The survey consisted of a slow drive along the gravel-laden dirt road with a visual inspection of the route along the way. There were no obvious significant historic ranch-related structures or objects located either on or adjacent immediately to the road.

Information contained in copies of historic and current maps, archival records, aerial photographs and previous projects pertaining to the history of the Chino Hills/Rolling M Ranch area is inconclusive regarding the earliest use of Bane Canyon as a transportation corridor. The earliest documented use of the canyon as a minor wagon road appears in a 1938 copy of an 1860 map of "Old Highways" in Greater Los Angeles, Orange, San Bernardino and Riverside counties. Because the map is drawn at a crude scale, it is difficult to ascertain the road's exact location compared to current park maps. A best guess is that there was an unimproved dirt wagon road extending eastward from La Habra along what appears to be Telegraph Canyon to a point approximately two miles northwest of San Juan Hill. From here, the road forks into two separate roads. One continues in a northerly direction, connecting itself to another dirt wagon road in what appears to be Soquel Canyon. At this point the road traveled in a northeasterly direction to meet the Butterfield Stage Road (today's Pomona-Rincon Road). The second road continues eastward to a point approximately one mile north of San Juan Hill. Likewise, the map shows the eastern fork of Telegraph Canyon Road heading toward the Butterfield Stage Road along a line just south of the T2S/T3S Township Section boundary (no Range indicated). Instead of continuing eastward toward the stage road, and the Yorba-Slaughter station, it jogged northward and ran parallel to the stage road (along

what may very well be the present East Fence Line Trail) until reaching the latter a mile or so southeast of where it met the Soquel Canyon Road.

More than likely, the roads followed well-established Indian trails. According to the 1860/1938 map, there were at least five Indian villages or rancherías surrounding Chino Hills. The roads could also have been frequented by Spanish Colonial and later Mexican vaqueros herding cattle to and from the surrounding ranchos. Road connections at La Habra connected what is now Chino Hills State Park to El Camino Real, the main wagon road between San Diego and Los Angeles. To the northeast, the road or roads' upper sections provided access to Chino, and the Old Mission Road (at Pomona), linking it to Mission San Gabriel to the west and its eastern asistencia near San Bernardino. From 1858 to 1861, the Butterfield Stage Road connected the area southward to Rincon. From here the road continued through Temescal Canyon to San Diego County, with links to Mexico, Arizona, and eventually St. Louis, Missouri.

Unfortunately, subsequent historic maps are no clearer in detail. For example, a 1939 reprint of a 1902 US Topographic map of the Corona Quadrangle shows only one unimproved dirt road traversing the future park. It runs along the lower Aliso Canyon drainage in a northerly direction from the Santa Ana Canyon road and railroad junction west of Prado. The road continued northward until the second Township Section south and west of T3S and R8W, respectively. It then continues in a northeasterly direction toward the Pomona-Rincon Road, near the junction of T3S/R8W Township lines. The road alignment appears to be following a route up lower Bane Canyon to a point where it goes up and over the ridge to Slaughter Canyon, where it continues on to the Yorba-Slaughter adobe. The map indicates one miscellaneous structure along the Slaughter Canyon road. Contemporary tax records for this parcel do not indicate improvements, however; suggesting that this structure may have been associated with seasonal use associated with ranching or mineral extraction activities, particularly petroleum. Although no large deposits were ever located or exploited within the future park, however several abandoned wells and mines along the route have been documented.

An early 1930s map of San Bernardino County is less helpful; it does not show any dirt roads within what is now Chino Hills State Park. It does, however, show three improved roads approaching the "Pellissier Ranch" (in Township Section 34) by way of Highway 71 and the Los Serranos Country Club. Located in neighboring Township Section 35 to the east, one of the roads in particular is noteworthy. It follows the same northeast to southwest alignment of a single-lane road that appears in the previous 1902/1939 and a subsequent 1967/1981 US Topographic Map of the Prado Dam Quadrangle. The latter describes it as an "improved, all-weather light-duty road," which begins at a point on the Pomona-Rincon Road. From here it travels southwesterly some 2,000 feet past a large structure next to a "Claypit." Until fairly recent times, this was an operating brickyard. The road continues into the northwest corner of Township Section 35, where it rises some 800 feet through a short pass, and under high-tension electrical power lines, into the northeastern corner of Township Section 34. At this point it enters Bane Canyon, and continues along the creek's eastern bank in a southerly direction toward the middle of Section 34 and its neighbor, Township Section 3. From here, the road travels in a

southeasterly direction through Section 3, where it meets a junction with an unimproved dirt road. The dirt road snakes in a northeasterly direction across an unnamed ridgeline into Township Section 2. The road was built apparently to service another line of high-tension electric power line that still bisects the park. The Bane Canyon Road continues under the latter in a southerly manner traveling across the northeastern corner of Township Section 10 into neighboring Section 11, where it meets the junction of the Slaughter Canyon Road. The latter connected Bane Canyon to the historic Yorba-Slaughter adobe and former Butterfield Stage Station. Except for another line of electrical power poles, and a windmill/pump in Township 11's northeast corner, the map does not indicate any additional buildings or structures on what is now State Park land. The Bane Canyon road continues along the canyon, from Township Section 11's southwestern corner into the southeastern corner of Township Section 10. At this point it reaches a three-way junction, which branches northwest into Upper Aliso Canyon, and southerly into Lower Aliso Canyon.

Because of the road's improved, "all-weather" condition, and from past research pertaining to the Pellissier and later Rolling M Ranch history, the Upper Aliso/Bane Canyon roads would have been adequate for trucking cattle in and out of the ranch using tractor/trailer rigs to the Pomona-Rincon Road and to a creamery at Chino. Naturally, this would have been the most logical route to enter the newly created park, which the 1986 General Plan describes as the "Existing North Entry." However, the plan did suggest that it be closed, preferring the development of an East Entry from the old Slaughter Canyon Road. The GP proposed that an entry road and trail corridor extend along the canyon, from a proposed extension of Euclid Avenue to the park's eastern boundary. The problem at the time was whether or not the owners of the parcels along the route were willing to provide a road easement through proposed residential development.

Despite the expansion of the Los Serranos residential community during the mid-1990s, California State Parks continued to use the Bane Canyon entrance. By this time, highway and residential development had all but obliterated the historic roadway from the park's entrance to the Rincon-Pomona Road.

3.7 ARCHAEOLOGY

3.7.1 Ethnographic Background Existing Conditions

Prior to contact with Europeans and the process of missionization, Native Americans had occupied both the mainland and offshore islands of what is now southern California. Chino Hills State Park is located in the southern inland area of the traditional Gabrielino territory, in close proximity to the Juaneño, Luiseño, Serrano, and Cahuilla groups territories. Ethnographic background information indicates that all these groups spoke Uto-Aztecans, Shoshonean-languages. The group names reflect the Spanish Mission name that they were associated with in the late 1700's.

The actual boundaries throughout time between these groups are not precisely known. Kroeber (1925) describes Gabrielino territory as extending from the San Gabriel

Mountains through Orange County south to Aliso Creek, and including Santa Catalina and San Clemente Islands. Chino Hills State Park appears to be located well within the borders of Gabrielino territory.

Hokan speaking groups bordered the Uto-Aztecan Shoshonean speakers both on the north and the south. Chumashan groups were located to the north and Yuman groups in the region of what is now San Diego County bracketed them. Referred to as the "Shoshonean wedge" (Koerper, 1979), this linguistic and cultural division was probably the result of a series of migrations of Shoshonean speakers into southern California (Koerper 1979, Macko 1987).

The Shoshonean foraging groups were seasonal hunting and gathering peoples, with cultural elements that distinctly varied from the Archaic Period peoples that preceded them. Differences included cremation, the use of the bow and arrow, and use of the acorn as a main food staple (Moratto 1984). Inland parts of the Gabrielino groups territory provided seasonally available terrestrial resources, including acorns and game. Elaborate clan and kinship systems existed between the Gabrielino and other groups which facilitated broad trade networks enabling the exchange of materials including Obsidian Butte obsidian, resources from the eastern deserts, and steatite from the Channel Islands.

Gabrielino social structural systems were not well recorded. At least three social classes, may have existed including those people who, based on ascribed status within the group were considered elite. This included the rich, and chiefs and their immediate families; a middle class, which included people of relatively high economic status or long-established lineages; and a class of people that included most other individuals in the society. Several lineages in autonomous political units comprised villages. Based on seasonal availability of certain resources, the village would divide into these lineage groups, and mobilize to exploit them, returning to the village between these forays (Bean and Smith 1978; Kroeber 1925)

Individual lineages had their own leader; and the village chief was from the dominant lineage. Several villages might be allied under a paramount chief. Chiefly positions were of an ascribed status, most often passed to the eldest son. The chiefly duties included providing village cohesion, leading warfare and peace negotiations with other groups, collecting tribute from the village(s) under his jurisdiction, and arbitrating disputes within the village. The chief's status was legitimized by his safekeeping of the sacred bundle, a representation of the link between the material and spiritual realms, and the embodiment of power (Bean and Smith 1978; Kroeber 1925).

Shamans were leaders in the spirit realm. The duties of the shaman included conducting healing and curing ceremonies, guarding of the sacred bundle, locating lost items, identifying and collecting poisons for arrows, and making rain (Bean and Smith 1978; Kroeber 1925). Marriages were made between individuals of equal social status, and, in the case of powerful lineages, marriages were arranged to establish political ties between the lineages (Bean and Smith 1978; Kroeber 1925). Men conducted the majority of the

heavy labor, hunting, fishing, and trading with other groups. Women's duties included gathering and preparing plant and animal resources, and making baskets, pots, and clothing (Bean and Smith 1978; Kroeber 1925).

Hunting tools included sinew-backed bows, wooden clubs, slings, and throwing clubs. Marine and maritime tools and implements included rafts, harpoons, spears, nets, hook and line. Various other implements and tools included deer scapulae saws, bone and shell needles, bone awls, scrapers, bone or shell flakers, wedges, stone knives and drills, mullers, manos, bark platters, shell spoons, and wooden paddles and bowls. Baskets were made from rush (*Juncus* sp.), deer grass (*Muhlenbergia rigens*), and squawbush (*Rhus trilobata*). Baskets were fashioned for hoppers, plates, trays, winnowers, leaching, straining, and gathering. Baskets were used in storing, preparing, and serving food, for keeping of personal items, and for ceremonial uses (Bean and Smith 1978; Kroeber 1925).

Santa Catalina soapstone quarries provided the the Gabrielino with exclusive access to this highly prized material which was used for making pipes, animal carvings, ritual objects, ornaments, and cooking utensils. Because steatite was so highly valued by groups throughout the southern California area, the Gabrielino profited well from trade of this commodity (Bean and Smith 1978; Kroeber 1925).

Gabrielino houses were circular structures, domed and made of thatched vegetation. House structures varied in size, and could be utilized by one to several families. Semicircular, earth-covered sweathouses were public structures used in male social ceremonies. Additional structures included menstrual huts and a ceremonial structure called a *yuv'ar*, an open-air structure built near the chief's house (Bean and Smith 1978; Kroeber 1925).

Clothing was minimal. During cold weather periods, deerskin, rabbit fur, or bird skin (with feathers intact) cloaks were worn. Coastal and Island groups used sea otter fur for cloaks. Yucca fiber sandals were sometimes worn. Red ochre was used by women on their faces and skin for adornment or protection from the sun. Adornment items included feathers, fur, shells, and beads (Bean and Smith 1978; Kroeber 1925).

3.7.2 Site Specific Archaeological Resources

Records searches were conducted at the South Central Coastal Information Center at California State University, Fullerton, and at the Archaeological Information Center at the San Bernardino County Museum within a one-mile radius of the project area by an outside archaeological consultant. The consultant was contracted by California State Parks to conduct an archaeological study and field survey in 2002. The searches included a review of all recorded archaeological sites, cultural resource reports and the California Points of Historical Interest, California Historical Landmarks, California Register of Historic Places, the National Register of Historic Places, and California State Historic Resources Inventory listings.

Within the APE, the records data indicate that three site locations and a number of isolate localities have been previously recorded. Approximately 80% of the APE was previously surveyed in 1983 by Fullerton College. Two of the prehistoric sites they reported, CA-SBR-5283 and CA-SBR-5284 were mapped at locations which they positioned near the current project APE. The Fullerton student archaeology team described site CA-SBR-5283 as a small milling station that consisted of a single metate, a single mano, and several mano fragments. Site CA-SBR-5284 was reported as consisting of three manos and numerous chert, jasper, and basalt flakes.

An intensive pedestrian survey that included the APE was conducted by BFSa between April 29 and May 16, 2002. Although Smith, et al could not relocate CA-SBR-5283 or CA-SBR-5284, the survey team found two new archaeological sites and thirteen isolates which were encountered and recorded outside the current APE but within the larger project area. The other site SBR-7010/H is an historic dirt road that runs southwest through Slaughter Canyon to Aliso Canyon and appears on a 1902 USGS map of the area.

Other attempts to relocate the reported site locations of CA-SBR-5283 and CA-SBR-5284 were conducted by several different teams of archaeologists, both California State Park and private sector, at different times. All were unsuccessful. Most recently, in October, 2003 a two-person team of professional CSP archaeologists from the CSP Southern Service Center in San Diego conducted field survey in another attempt to relocate and assess these two previously recorded prehistoric archaeological sites. The team utilized newly generated maps, both topographic and aerial with the reported site locations plotted on them based on GPS positioning technology in an attempt to focus the search for the reported sites.

Earlier searches between 1999 and 2002 by several different archaeological survey teams (e.g., District Archaeologist, other State Archaeologists, and a team of CSP archaeology students) also failed to relocate the sites.

In summary, the validity/authenticity of the sites is considered questionable due to the experience and expertise level of the initial recordation by student- archaeologists. The student team may have mis-identified naturally occurring lithic material as artifactual. It is also possible that the student team significantly mis-plotted the site locations. A less probable reason is that heavy ground cover obscured the locations such that the several archaeology teams that searched for the sites after their initial reporting by the student team were unable to find the localities.

Site CA-SBR-5284 is reported by the student team to be situated on the extreme edge/outside margin of the APE atop an elevated ridge which is not to be impacted (directly or indirectly) by the proposed project. Visits to this area and adjacent similar areas by professional archaeologists detected no cultural resources.

Site CA-SBR-5283, while situated within the APE could not be relocated during three separate formal survey team searches and additional walk-overs by archaeologists attempting to re-locate the reported site areas.

The plotted location of CA-SBR-5283 lies just outside the project APE in an environmentally sensitive location within a riparian habitat adjacent to a stream. This reported site locality was also not detected by several subsequent archaeological field surveys.

The other site SBR-7010/H is an historic dirt road that runs southwest through Slaughter Canyon to Aliso Canyon and appears on a 1902 USGS map of the area. It is outside the project APE

4 KNOWN CONTROVERSIES

The City of Chino Hills and several residents of the neighborhood behind the Bane Canyon Entrance Road have indicated that there are conflicting issues with the existing entrance road and perceive that the new entrance road project would not only continue the existing issues but aggravate them. These issues include park users parking on Elinvar Drive and Sapphire Road as well as noise, traffic, trash, urinating in public, and horse manure left on the road and along the sidewalk across the road. The residents and City have stated that the park users are seeking to avoid paying day-use fees at the Park and will continue to use the area along Sapphire Road and Elinvar Drive as long as the entrance road is on Bane Canyon. They prefer that the entrance road be placed along the Slaughter Canyon alignment. Park users have also indicated that they do clean up their horse manure, do not leave trash, and do not like to drive up the existing entrance road because of vehicle damage, dust, and safety issues with the narrow road.

As discussed in Section 5.2.1 and Appendix C, traffic levels on these two roads are very light and the project is not estimated to cause a significant effect on traffic or traffic safety. The highest traffic levels occurred during the morning commute hour on a weekday, of which, only 4 trips were to the Park. Further, the approved February 1999 Chino Hills State Park General Plan maximum Public Use only provides facilities to accommodate 1,310 people in the park with an estimated peak number of trips at 945. It is further estimated that these trips will be split between the entrance road at Bane Canyon and the proposed Visitor Center in Orange County along State Highway 142. The entrance road at Bane Canyon will provide service to the Park's interior facilities at or near the Rolling M Ranch.

Park use fees may be a factor encouraging people to park outside the park, but an annual fee is available for \$125.00 for frequent users and day-use fees are \$5.00. These fees are reasonably priced for the quality of experience and provide revenues needed to operate the Park. Although a multi-use trail will be available alongside the entrance road, it is anticipated that this route will primarily provide access for the neighborhood residents and nearby equestrian stables. This section of the multi-use trail is steep and does not share the same level of scenic quality that is available in the Park interior. A more satisfactory trail experience is available in many locations within the Park. California State Parks anticipates that, given the opportunity to drive a safe, paved roadway into the Park's interior, most users will stage within the Park at the Rolling M Ranch or Equestrian Staging Area, unless the Park exceeds capacity. Should fee avoidance become an issue in this location, park operations may consider charging a user fee for those entering the park by bicycle, horse & foot.

The project has been designed to focus visitor use away from the residential housing in the City of Chino Hills. The entrance kiosk building, public restroom, and new visitor parking has been located between Stations 21+22 and 44+14 (Please see Figures 2.C-3 and 2.C-4), out of sight and hearing of the residential area. However, California State Parks will coordinate with the City of Chino Hills to develop a mutually acceptable interface between the Park and the residential portion of the City. Such an interface could include

trash receptacles, informational and interpretive signage, and portable restrooms, if needed. Although it is not anticipated that the Park will exceed its parking capacity on a regular basis, should this situation occur in the future, park operations will coordinate with the City of Chino Hills to develop a mutually acceptable action plan to reduce visitor impacts on neighboring houses. These actions could include limiting parking or signage on Soquel Canyon Road indicating when the Park is full. Additionally, speeding both inside and outside the Park is a controversial issue. Inside the Park, it affects the safety of wildlife and visitors, outside the Park, it affects the people living near the Park, especially if they are not in a motor vehicle and accessing the Park. In addition to strict enforcement of the 15 MPH speed limit inside the Park, CSP will endeavor to provide frequent signage about the speed limit and interpretation to stress the importance of minimizing conflicts between users and harm to wildlife. As part of the interface between the City of Chino Hills and CSP, signage could be developed to help reduce speeding on the City Streets near the Park entrance.

California State Parks ended discussions with the private landholder whose property must be crossed for the Slaughter Canyon Alternative. It is not the policy of CSP to pursue an acquisition or easement from an unwilling property owner when access is already available on an existing easement. Should the landholder reconsider, then the above conflicts may occur along the Slaughter Canyon Alternative. Urban planning could incorporate the change but the visual impacts outside the Park associated with the Slaughter Canyon Alternative are far greater than the Bane Canyon Alternative.

5 ENVIRONMENTAL EFFECTS & MITIGATION

This section describes the probable impacts of the Preferred Alternative, followed by separate sections that address the environmental effects of the No Project alternative and an Environmentally Superior Alternative. The environmental impact analysis and the proposed mitigation measures are based on preliminary project design and current information and circumstances. Technical reports and analyses were prepared as part of the environmental studies for the proposed action. These reports analyze existing conditions and identify potential impacts for the Preferred Alternative. This section summarizes the findings of these reports and analyses and incorporates information that may be more current than the information contained in the technical studies. The following studies and analyses were conducted for this EIR: biology report (Appendix B), a paleontology study (confidential report), a traffic study (Appendix C), archaeological resources and historic resources analyses. The *Final Concept Report, Chino Hills State Park Entrance Road Alternatives Study* was prepared in July 2002 by PSOMAS and serves as a source document.

5.1 POTENTIALLY SIGNIFICANT IMPACTS & PROPOSED MITIGATION

5.1.1 Natural Resources

5.1.1.1 Natural Resource Thresholds of Significance

Appendix G of the *CEQA Guidelines* contains criteria for determining the significance of biological resources impacts. These guidelines outline the following questions for assessing whether a project would have a significant impact on biological resources. Impacts are considered significant if:

- The project would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- The project would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- The project would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- The project would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- The project would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- The project would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.1.1.2 Wetland and Riparian Habitat

Impact Bio-1: The project removes and fragments wetland and riparian habitat.

Discussion Bio-1: The project as designed would impact approximately 0.17 acres of riparian habitat within the project zone in Bane Canyon (See Figures 3.1, 3.2, and 3.3). The project would also impact approximately 0.13 acres of wetland habitat within willow and sycamore woodlands that are dominated by wetland species. The project is designed to avoid highest-quality wetland and riparian areas where possible, however impacts to wetland and riparian habitat would still result from project construction. These habitats within the proposed project area include both the southern willow scrub community and the California sycamore series. Each provides important foraging and nesting habitat for a variety of birds.

Impacts would be potentially significant because these habitats are essential for both common and special-status wildlife species. Some of the riparian habitat that would be removed within Bane Canyon is somewhat patchy. Road construction, grading and paving would result in the removal of riparian habitat, and some degradation may also occur due to habitat fragmentation. Impacts may also result from erosion and grading.

Mitigation Bio-1: Mitigation for the project includes restoration and avoidance of wetland and riparian habitat. To the maximum extent possible, project design will avoid or minimize impacts to riparian area including willow scrub and sycamore woodland communities. Environmentally sensitive areas (ESA) shall be delineated and temporarily fenced with safety fencing prior to construction activities. A CSP-qualified biologist shall review the working drawings and specifications prior to construction and monitor construction activities, as necessary, to minimize and avoid impacts to sensitive habitat. Staging and/or stockpile areas will be confined to designated sites outside of sensitive resource areas. The biological monitor will conduct training in order to inform workers how to identify and avoid sensitive species and habitats. This training will also delineate the boundaries of the construction zone and identify proper disposal of staff and construction debris, and proper response to fluid spill.

Habitat would be restored within Bane Canyon at a minimum 3:1 ratio. Restoration would occur onsite at locations where existing habitat is degraded or patchy, and would contribute to establishing continuity within the existing habitat. Buffer zones will be planted with native vegetation in areas where the new road alignment comes within 50 feet of the creek. A detailed restoration plan would be prepared and implemented for habitat replacement for willow scrub and sycamore woodland communities. The plan would designate sites for onsite restoration. The plan would provide for planting native

species, weed management, and maintenance methods. The restoration plan would also outline a project timeline, success criteria and contingency actions, and a monitoring plan.

Tree protection: Juvenile sycamores may be removed as a result of this project. No mature trees over 3 inches DBH (Diameter at Breast Height) will be removed during this project. If construction work is conducted near mature trees, these would be protected with safety fencing and/or certified weed-free straw bales, with a 10-foot buffer zone. Juvenile sycamores removed as a result of this project would be replaced at a minimum 10:1 ratio.

All construction activities will be subject to measures indicated by the California Department of Fish and Game and US Army Corps of Engineers permits.

Impact Bio-2: The project removes 0.87 acres of coastal sage scrub

Discussion Bio-2: Coastal sage scrub habitat would be permanently impacted as a result of this project (approximately 0.87 acres). This vegetation type potentially provides foraging habitat and cover for a number of species, including the coastal California gnatcatcher. However, no sensitive species have been observed utilizing the scrub habitat in Bane Canyon. The project design avoids coastal sage scrub where possible, however a small amount of habitat would be removed. The habitat that would be affected is patchy and not contiguous throughout the Bane Canyon area, and is of moderate to low quality.

Impacts would result from activities associated with road construction and grading. Impacts are potentially significant due to the high habitat value and sensitivity of coastal sage scrub in southern California. Coastal sage scrub must be conserved according to guidelines of the NCCP in the region (DFG 2004).

Mitigation Bio-2: Restoration and avoidance of impacts to coastal sage scrub habitat. To the maximum extent possible, project design will avoid or minimize impacts to coastal sage scrub communities. Sensitive areas would be delineated and temporarily fenced with safety fencing prior to construction activities. A CSP-qualified biologist would monitor construction activities. Staging and/or stockpile areas will be confined to designated sites outside of sensitive resource areas. The biologist will conduct training in order to inform workers how to identify and avoid sensitive species and habitats.

The coastal sage scrub habitat that would be removed as a result of this project is of relatively low quality, and no sensitive species have been observed associated with the coastal sage scrub in Bane Canyon. Habitat that is removed will be restored onsite at a 1:1 ratio. CSP ecologists will designate onsite locations for habitat enhancement and restoration. A detailed restoration plan (See Conceptual Plan, Appendix B) would be prepared prior to restoration activities and approved by CSP ecologists. All activities will be conducted according to accepted protocols for the revegetation of native species

in Chino Hills State Park and will include the use of seed stock from within the park wherever possible.

Impact Bio-3: The project construction may adversely impact wildlife species, including special-status wildlife species.

Discussion: As described in the Environmental Setting section, a number of special-status wildlife species exist within the project zone. Project activities such as grading, paving, excavating and noise generation could result in significant impacts to one or more of these species during construction.

Mitigation Bio-3. General wildlife protection measures

ESA will be designated prior to construction and will be fenced with orange safety fencing. All activity and equipment would be kept within designated staging and work areas. A CSP- approved monitor will monitor construction activities onsite.

The CSP-approved biologist will conduct a training session for all project personnel prior to the start of construction. Instruction will cover identification of sensitive species and their habitat, and the specific measures required to protect and avoid sensitive wildlife and habitats. Training will address general conservation measures, proper disposal of and covering of trash and construction debris, and proper response to fluid spills. Training will also address measures to identify, conserve, and protect sensitive species if any are found at the construction site, and the appropriate response to observation of any sensitive species. The training will be completed prior to authorizing personnel to work in the project area.

A CSP-approved biologist (Biological monitor) would conduct visual surveys of the project during construction activity to ensure that no sensitive wildlife species are found within the construction zone. If sensitive wildlife species are found within the construction boundaries, construction activities may be temporarily modified to maintain a safe distance from sensitive wildlife until the animal is temporarily relocated. If a listed threatened or endangered species is found, the biological monitor would have the authority to suspend, redirect or modify work in the area until the USFWS has approved an appropriate course of action. The monitor would notify appropriate CSP personnel and the USFWS immediately following any work stoppage. The biological monitor will communicate issues directly to the State's Representative.

The contractor will prepare a spill prevention and response plan prior to the start of construction, and maintain a spill kit onsite throughout the life of the project. This plan would include a map that delineates construction staging areas, where refueling, lubrication, and maintenance of equipment may occur. All fueling and maintenance of construction equipment and staging areas shall occur at least 50 feet from any water source (wetlands, streams, ponds, seeps, springs, etc.) or riparian habitat. Fueling and maintenance would be conducted on pavement unless designated otherwise. Construction equipment shall be routinely evaluated for fluid leaks.

Equipment washing would only occur within a designated, contained wash area. In the event of any spill or release of any chemical in any physical form at the project site or within the boundaries of Chino Hills State Park during construction, the contractor would immediately notify the State Representative.

Impact Bio-4: The project grading, road and bridge construction and operation potentially causes adverse impacts to western spadefoot toads.

Discussion Bio-4: Impacts may result to sensitive western spadefoot toads during construction of this project. Spadefoot toads are active especially during warm, wet periods in springtime. They utilize habitat near the riparian corridor in Bane Canyon, and may be found near pools after a rainstorm, especially in warm spring weather. Spadefoot toads were found in surveys in November 2003 in Bane Canyon.

Impacts may result to sensitive western spadefoot toads during project excavation, grading, or construction in riparian and coastal sage scrub habitats in the project area. Direct impacts could also result to spadefoot toads during construction activities and traffic on the Bane Canyon road after rain events. Construction noise and ground vibrations may stimulate toads into activity in construction zones which could result in their mortality. Indirect impacts may also result from removal of riparian and coastal sage scrub habitat. Indirect impacts to toads and their habitat may also result from erosion resulting from project grading and construction.

Mitigation Bio-4. Protection of western spadefoot toads. This project footprint has been designed to minimize impacts to wetland and riparian habitat that support spadefoot toads. In addition, mitigation and avoidance measures will be in place to protect sensitive animals and habitat (See Mitigations Bio-1 and Bio-3). ESA would be delineated and temporarily fenced with safety fencing prior to construction activities. A DPR-qualified biologist would monitor construction activities. The biologist will conduct training in order to inform workers how to identify and avoid sensitive species and habitats. Erosion control (BMPs) measures would be in place in order to control erosion during rain events (see Mitigation Bio-1). All open soil would be covered during winter months in order to prevent erosion. Watering of open soil and roads in construction zones (for air pollution control) will be restricted so that there is no runoff into habitat or surface waters in Bane Canyon.

A biological monitor shall perform routine searches for toads to determine if vibration and low frequency noise has activated adults from estivation. Any active toads shall be relocated to an area of no impact with appropriate aestivation habitat. Routine searches for toads in and around the construction activity shall be conducted when soils are wet from rain.

In order to protect western spadefoot toads, no traffic from construction equipment will occur between dawn and dusk in the project area and on the existing Bane Canyon Road between November and May. No construction would occur within 500 feet of sensitive wetland or riparian areas during wet weather between November and May. Construction

activities or traffic on the Bane Canyon road will not occur after rain events until approved by Park Rangers. All riparian and coastal sage scrub habitats being removed would be replaced, in kind, at sites within the park (see Mitigation Bio-1).

Impact Bio-5: Project construction may impact trees used by raptors for nesting.

Discussion Bio-5: Several raptor species may forage and nest in trees in Bane Canyon. Raptors and their nests are protected under California Fish and Game Code (Section 3503.3). The disturbance or loss of an active raptor nest would be considered a significant impact, so the risk of nest disturbance or removal would be considered a potentially significant effect. In addition, all nesting birds are protected under the Federal Migratory Bird Treaty Act, and disruption of any nesting birds would be considered a significant effect.

Cooper's hawks, white-tailed kite and others have been observed foraging in Bane Canyon, and suitable habitat exists there for nesting, though no nests have been documented. The large trees in the canyon could provide beneficial nesting habitat. This project is not expected to significantly impact raptors unless they nest onsite. A number of trees that could be used by these raptor species could be removed as part of the project.

Mitigation Bio-5. Protection for raptors and habitat. Any trees that will be removed as a part of this project will be removed outside of the raptor nesting season (removal may occur between September 1 and January 29). During the nesting season, construction in the canyon may be confined only to the first (northernmost) mile of road (where there is only limited, lower quality habitat that may support nesting birds). To the maximum extent practicable, all project related construction activities within 300 feet of the riparian habitat and 100 feet of other sensitive habitat identified by CSP ecologists, will be limited to the non-breeding season, (September 1 through January 29). This is necessary to avoid disrupting normal nesting behavior of migratory and sensitive birds. If the project activities cannot avoid the breeding season, CSP will arrange for weekly surveys by a qualified biologist to detect and protect native birds in habitat within 300 feet of the work area. If known sensitive species are discovered nesting within the area of potential impact, surveys will continue through the nesting period during construction. If the biologist determines that the project activities are disrupting nesting behavior of a sensitive species, the impacting-activities will be rescheduled, redirected, or modified to avoid significant impacts.

If construction activities during the nesting season may potentially impact nesting habitat for raptors, surveys will be conducted prior to construction to determine the presence of nesting raptors. Beginning thirty (30) days prior to the potential disturbance of suitable nesting habitat, a CSP-qualified biologist would conduct weekly bird surveys to detect any protected native birds in the habitat to be removed and within 500 feet of the construction work area. The last survey would be conducted no more than three days prior to the initiation of construction activities. If an active nest is located, construction activities within 500 feet of the nest shall be postponed until the nest is vacated, juveniles

have fledged, and there is no evidence of a second nesting attempt. All habitat being removed would be replaced, in kind, at sites within the park (as designated in Mitigation Bio-1).

Impact Bio-6: Removal of tall willows and cottonwoods may cause adverse impacts to long-eared owls, if nesting.

Discussion Bio-6: The long-eared owl occurs in riparian habitat and dense stands of trees. It prefers tall willows and cottonwoods in riparian bottomlands. There are no records of long-eared owls occurring in Bane Canyon, however suitable habitat exists in the canyon. No impacts are expected to affect long-eared owls unless they are nesting onsite.

Mitigation Bio-6. Impacts to long-eared owls. No riparian trees would be removed during the breeding season (tree removal may only occur between September 1 and January 29). (See Mitigation Bio-5). A CSP-qualified biologist would survey potential nesting areas beginning thirty (30) days prior to the potential disturbance of suitable nesting habitat, according to the guidelines outlined in Mitigation Bio-5. If an active nest is located, construction activities within 500 feet of the nest shall be postponed until the nest is vacated and work would be redirected to prevent disturbance to nesting owls. All habitat being removed would be replaced, in kind, at sites within the park (as designated in Mitigation Bio-1).

Impact Bio-7: Potential impacts to sensitive riparian bird species may result if these birds nest in the project area during construction. .

Discussion Bio-7: Impacts to sensitive passerine bird species that may use riparian habitat may occur as a result of this project. These include the least Bell's vireo, yellow-breasted chat, yellow warbler, willow flycatcher, southwestern willow flycatcher subspecies, and California thrasher. Only the California thrasher, yellow warbler, and yellow-breasted chat have been observed foraging in Bane Canyon during surveys. Though none of these birds have been observed nesting in Bane Canyon, suitable habitat exists to support them. Bane Canyon also provides a linkage to higher quality foraging and nesting habitat for these species in Aliso Canyon. Direct impacts would occur if any of these species were found nesting in riparian areas, and these impacts would be potentially significant. Indirect impacts may occur to all of these species due to habitat loss and fragmentation from project construction. Approximately 0.17 acres of riparian habitat would be removed during project construction.

Mitigation Bio-7: Protection of sensitive riparian bird species. Construction during the nesting season (February 1 to August 31) may be limited to the first (northernmost) mile of road (where there is only limited, lower quality habitat that may support nesting birds), in order to avoid impacts to sensitive bird species. To the maximum extent practicable, all project related construction activities within 300 feet of the riparian habitat and 100 feet of other sensitive habitat identified by CSP ecologists, will be limited to the non-breeding season, (September 1 through January 29). This is necessary to avoid disrupting

normal nesting behavior of migratory and sensitive birds. If the project activities cannot avoid the breeding season, CSP will arrange for weekly surveys by a qualified biologist to detect and protect native birds in habitat within 300 feet of the work area. All construction activities that impact native habitat would be monitored by a CSP qualified ecologist and noise levels would be monitored when construction occurs within the vicinity of sensitive habitat. Construction activities near ESA's which produce noise levels of 60 decibels or greater will be scheduled to take place during the non-breeding season to the maximum extent practicable. If sensitive birds are observed during construction, work will be redirected and appropriate action taken to prevent disturbance to nesting birds.

If removal of riparian habitat is necessary, it would be conducted outside of the nesting season (habitat may be removed from September 1-February 14). If construction activities during the nesting season may potentially impact nesting habitat for these birds, surveys will be conducted prior to construction to determine the presence of nesting birds. Beginning thirty (30) days prior to the potential disturbance of suitable nesting habitat, a CSP-qualified biologist would conduct weekly bird surveys to detect any protected native birds in the habitat to be removed and within 300 feet of the construction work area. The last survey would be conducted no more than three days prior to the initiation of construction activities. If an active nest is located, construction activities within 300 feet of the nest shall be postponed until the nest is vacated, juveniles have fledged, and there is no evidence of a second nesting attempt. All habitat being removed would be replaced, in kind, at sites within the park (as designated in Mitigation Bio-1).

Impact Bio-8: The construction of the project may cause indirect adverse impacts to the coastal California gnatcatcher due to habitat loss.

Discussion Bio-8: The coastal California gnatcatcher utilizes coastal sage scrub habitat in southern California. Marginal habitat exists for this bird in Bane Canyon, however none have been observed there during surveys, and none are expected to nest there. No direct impacts are expected to the California gnatcatcher, however indirect effects may result due to habitat loss.

Mitigation Bio-8: Protection of coastal California gnatcatcher. Impacts to coastal sage scrub will be minimized, and a biological monitor will monitor construction activities in this area (See Mitigations Bio-2 and Bio-3).

All habitat removal would be conducted according to guidelines for protection of coastal sage scrub habitat (Mitigation Bio-2). Habitat that is impacted will be restored onsite at a 1:1 ratio. California State Park ecologists will designate onsite locations for habitat enhancement and restoration. A detailed restoration plan (See Conceptual Plan, Appendix B) would be prepared prior to restoration activities. All activities will be conducted according to measures in the NCCP/HCP agreement.

Impact Bio-9: Project construction may cause adverse impacts to sensitive upland bird species.

Discussion Bio-9: Impacts to nesting upland birds, including the California horned lark, grasshopper sparrow, and southern California rufous-crowned sparrow could result from project construction and grading during the breeding season. These birds may forage and nest on the ground, in low shrubs, and open grassy areas.

Mitigation Bio-9: Protection of sensitive upland bird species.

Construction activities during the nesting season will be monitored by a DPR-qualified ecologist. The project footprint and staging areas will be mowed and vegetation removed prior to the nesting season (vegetation removal may occur from Sept. 1 to January 29.) If construction activities during the nesting season (February 1 to August 31) may potentially impact nesting habitat for these birds, surveys will be conducted prior to construction to determine the presence of nesting birds. Beginning thirty (30) days prior to the potential disturbance of suitable nesting habitat, a DPR-qualified biologist would conduct weekly bird surveys to detect any protected native birds in the habitat to be removed and within 300 feet of the construction work area. The last survey would be conducted no more than three days prior to the initiation of construction activities. If an active nest is located, construction activities within 300 feet of the nest shall be postponed until the nest is vacated, juveniles have fledged, and there is no evidence of a second nesting attempt.

Impact Bio-10: Removal of trees in Bane Canyon could cause adverse impacts to sensitive bat species.

Discussion Bio-10: Special-status bat species could potentially occur within the Bane Canyon area, and there is potential habitat for both the pallid bat and the California Mastiff Bat (California Species of Special Concern). Either of these species may roost in trees such as riparian sycamores. Sycamores in the canyon may provide suitable roosting habitat within Bane Canyon. Both of these species have been found foraging in Bane Canyon (DPR 2002).

Mitigation Bio-10: Protection for bat species. No mature riparian habitat, including sycamores over 3 inches DBH, will be removed from February 1 to September 1 (see Mitigation Bio-5). All other habitat being removed would be replaced, in kind, at sites within the park (as designated in Mitigation Bio-1).

Finding Bio 1-10: With implementation of the proposed mitigation measures, significant biological resource impacts from this project would be reduced to a less-than-significant level.

5.1.2 Water Quality, Floodplain & Hydrology

Impact: The project has the potential to obstruct water flow within the 100-year Floodplain and receive flood related damages for two blue-line streams. Obstruction or

increased water flow due to the roadway construction could concentrate sheetflow floodwater onto specific areas, causing erosion.

Discussion: The project will be designed to allow adequate flow during storm events. In addition, during the detailed design process, proper drainage design will alleviate potential erosion impacts. New bridges are proposed that will improve the existing culvert crossings in Bane Canyon.

Mitigation WQ-1: Final site design, specifications, and grading will incorporate an hydrological analysis to eliminate potential erosion from roadway drainage and proper bridge design.

Impact: The project has the potential to adversely affect water quality near two blue-line streams through the introduction of a new paved roadway, new slopes, a new parking lot, vehicular activity, and both impervious & pervious surfaces that may increase the velocity of water runoff.

Discussion: The total amount of new impervious and pervious surfaces will be relatively small and limited primarily to the roadway surface, the new slopes, and the hardscape surrounding the new entrance Kiosk, restroom and maintenance building.

Mitigation WQ-2: The final landscape design will incorporate water quality control measures such as landscaping, energy dissipaters, brow ditches, vegetated swales and strips, and rock filled trenches.

Impact: During construction, grading of land and fueling and maintenance of equipment could introduce siltation or contaminants into the watershed, adversely affecting water quality.

Discussion: The potential for adverse effects on water quality & landform due to increased water velocity & erosion, particularly in steep areas, is potentially significant. There are standard best management practices (BMPS) that avoid or minimize potentially significant water quality issues due to construction impacts. Such measures will be incorporated into the BMP plan for the project construction. These BMPs will address erosion control to minimize the effect of increased runoff due to the concentration and increased velocity of sheet flow water from the construction work site.

Mitigation WQ-3: Fueling and maintenance of construction vehicles would occur at least 50 feet from sensitive wetland and riparian habitat. Construction equipment shall be routinely evaluated for fluid leaks. During construction, DPR-approved best management practices (BMPs) would be used to ensure that work does not result in increased erosion or siltation. Erosion control measures, such as silt fencing, weed-free straw bales or wattle barriers, and sediment traps and/or basins would be installed along the perimeter of the construction site and around areas where ditches or culverts could channel site runoff into nearby wetlands or sensitive biological communities.

Finding: Even without mitigation, potential adverse affects to water quality after construction are less than significant. However, as stewards of the park resources, mitigation measures are proposed to reduce the potential for erosion both during and post construction.

5.1.3 Aesthetics

Impact: Due to the steep topography along portions of the alignment, construction of the road will require large cut and fill slopes and retaining walls that will be seen both within the park by park users and immediately adjacent to the entrance by the residential neighborhood shown on Figure 2.1

Discussion: Construction of the road will create a change in the rural/park landscape that includes cut and fill slopes up to 23-feet high and retaining walls up to 22 feet high. In some areas, a combination of retaining walls and slope-backed cut slopes will be used. The road and mixed-use trail will create a footprint that is more than double the size of the existing road. As indicated in the Decision Research Study, open space is very important to a large number of nearby residents. The visual quality of the open space is also important. However, the road, as shown in Figure 3.4, will have a relatively minor effect on the landscape at the Park entrance. Therefore, the visual impact on the adjacent neighborhood will not be substantial, particularly after revegetation. Short-term visual impacts may be significant given the sensitivity of the view of the Park. As the native landscaping matures, the aesthetic nature of the project will improve because the cut and fill slopes will blend in better with the surrounding grasslands. The proposed retaining walls will adversely affect views within the Park for park users. The effect will occur primarily within the park interior and will have significant adverse effects for trail users, those on vista points, and those traveling on the new entrance road.

Mitigation Vis-1: Appropriate native plantings will be incorporated into the site planning and revegetation. The retaining walls will incorporate textural or coloring treatments as funding allows. California State Parks (CSP) will work with the City of Chino Hills to develop and entrance that provides a visual interface between the urban neighborhood and the Park.

Finding: Aesthetic impacts due to the construction of the proposed project will remain significant even after mitigation, particularly in the park's interior. There will be an extended period of time until the native landscaping matures and reduces the visual effect of the cut and fill slopes. The retaining walls will cause significant adverse visual effects unless a cost effective manner of disguising their prominence along the road can be implemented.

5.1.4 Geologic Hazards

Impact: Potential landslides and erosion may occur along the project site. Additionally, the project is located in a seismically active area.

Discussion: As noted in Section 3.3, the project site is located in an area with landslide, slumping, and seismic vulnerability. This is a relatively common occurrence in both road building and urban construction. Geotechnical investigations during the detailed design phase of the project, provide the data needed to design and grade the proposed developments with little or minimized risk. Such design detail would include, for example, the depth of the footings needed to construct the retaining walls.

Mitigation Geo-1: The project facilities will be designed according to accepted and recommended engineering and geotechnical specifications.

Finding: Risk due to geological hazards will be mitigated below a level of significance.

5.1.5 Paleontology

Impact: Excavation in conjunction with development has a high potential to adversely impact significant nonrenewable paleontologic resources present within the boundaries of the project site.

Discussion: This paleontological sensitivity is high throughout all undeveloped portions of the property, and is also high for any *in situ* sediments that might be exposed at depth in both the developed and undeveloped portions of the site. A qualified vertebrate paleontologist would be able to excavate such resources, if found, and should monitor the project to identify such resources as the excavation proceeds. Such resources would provide a valuable interpretive element for park educational programs.

Mitigation Paleo-1: A qualified paleontologic monitor should be present for excavation in areas identified as likely to contain paleontologic resources. Monitors should be equipped to salvage fossils as unearthed, in order to avoid construction delays, and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. Monitors shall be empowered to temporarily halt and redirect work to allow removal of abundant or large specimens. The monitor shall identify areas where fossils are not present subsurface or to have low potential to contain fossil resources.

Mitigation Paleo-2: Recovered specimens will be prepared, identified, and preserved and curated either in an accredited museum repository or as part of the Park interpretive display. A report shall be prepared to document the findings and curation.

Finding: Potentially significant adverse effects on paleontologic resources will be mitigated below significance with recovery, identification and curation.

5.1.6 Public Services & Utilities

Impact: The project will affect access to a major waterline and storage facility for the City of Chino Hills during construction. Additionally, the project will affect park public services during construction and for maintenance after construction.

Discussion: The City of Chino Hills maintains and operates a 30-inch waterline along the existing entrance road and a 5 million gallon tank near the highpoint of the road. The City maintains the line on a daily basis. Temporary closures may be necessary due to the steep topography approaching the water tank site, however, these will be coordinated with the City to allow necessary access for operations of the facility. It is likely that the park entrance would be closed to the public during the construction of this park of the roadway and access for the on-site resident ranger would be restricted or forced to other easement locations such as the Telegraph Canyon trail. The project is not anticipated to increase the need for fire or law enforcement service. CSP rangers are law enforcement officers and will close the park to visitors in the event of extreme fire danger or an active wildfire.

Mitigation PubSer-1: Please also refer to Section 2.2, Construction Management. California State Parks will coordinate with the City of Chino Hills to maintain access to the waterline and tank as needed.

Finding: Potentially significant adverse impacts to the City of Chino Hills water facilities will be mitigated below a level of significance with coordination.

5.1.7 Noise

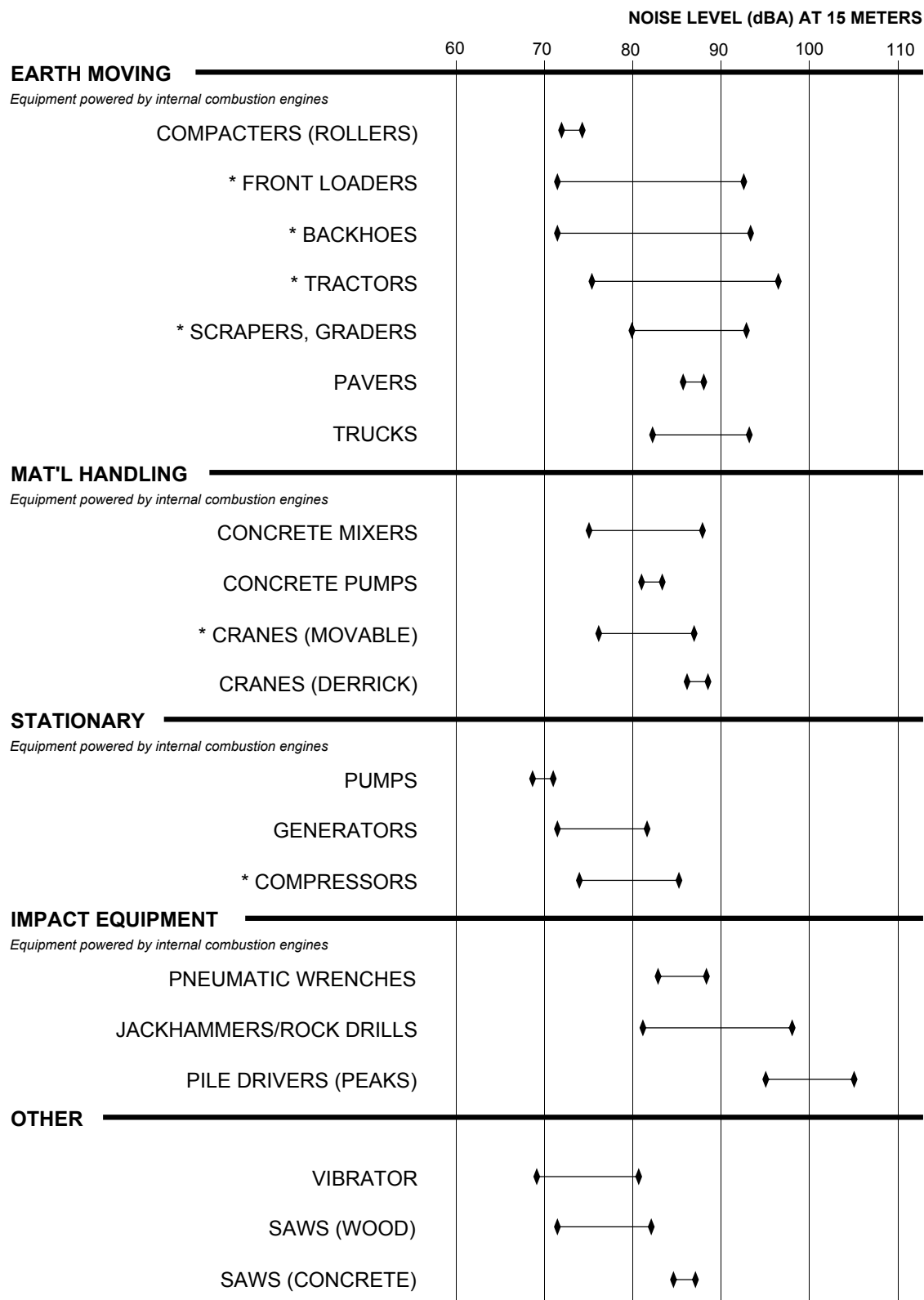
Impact: Construction impacts will introduce a new source of noise at the project site. Operational impacts may increase existing noise levels due to park access.

Discussion: Operation of heavy equipment for the proposed project is very loud but temporary in nature (Please see noise tables A and B). Sensitive receptors for noise include neighborhood residents, birds, and park users. Operational noise should not be louder than the ambient noise on site with the exception of intermittent large vehicles such as buses, recreational vehicles or trucks pulling horse trailers that are expected to increase in numbers over the existing users. Although traffic numbers are expected to increase, the 1999 Chino Hills General Plan limits the number of facilities that will accommodate the public. The worst-case for expected peak trips to the park on a daily basis is 945, which will be split between the entrance road and the visitor center on the west end of the park. The traffic study, indicates that future traffic volumes will be low, therefore, this impact is not considered significant. Additionally, it is anticipated that noise levels due to park users parking adjacent to the residential area may decrease as they drive into the park on the improved road.

Mitigation Noise-1: Work hours within ¼ mile of the residential neighborhood shall not begin before 6:30 AM and shall cease by 7 PM, Monday through Friday. Work hours within ¼ mile of the residential neighborhood shall not begin before 8:00 AM and shall cease by 5 PM, on Saturdays, and there shall be no work on Sundays. Access by large, noisy equipment to the work site shall also be limited to the above hours. Primary staging for the project will not occur within ¼ mile of the residential neighborhood. Secondary staging for the first phase of construction may be required within ¼ mile of the residences, however, it will be avoided, if feasible, and of limited duration.

Table A

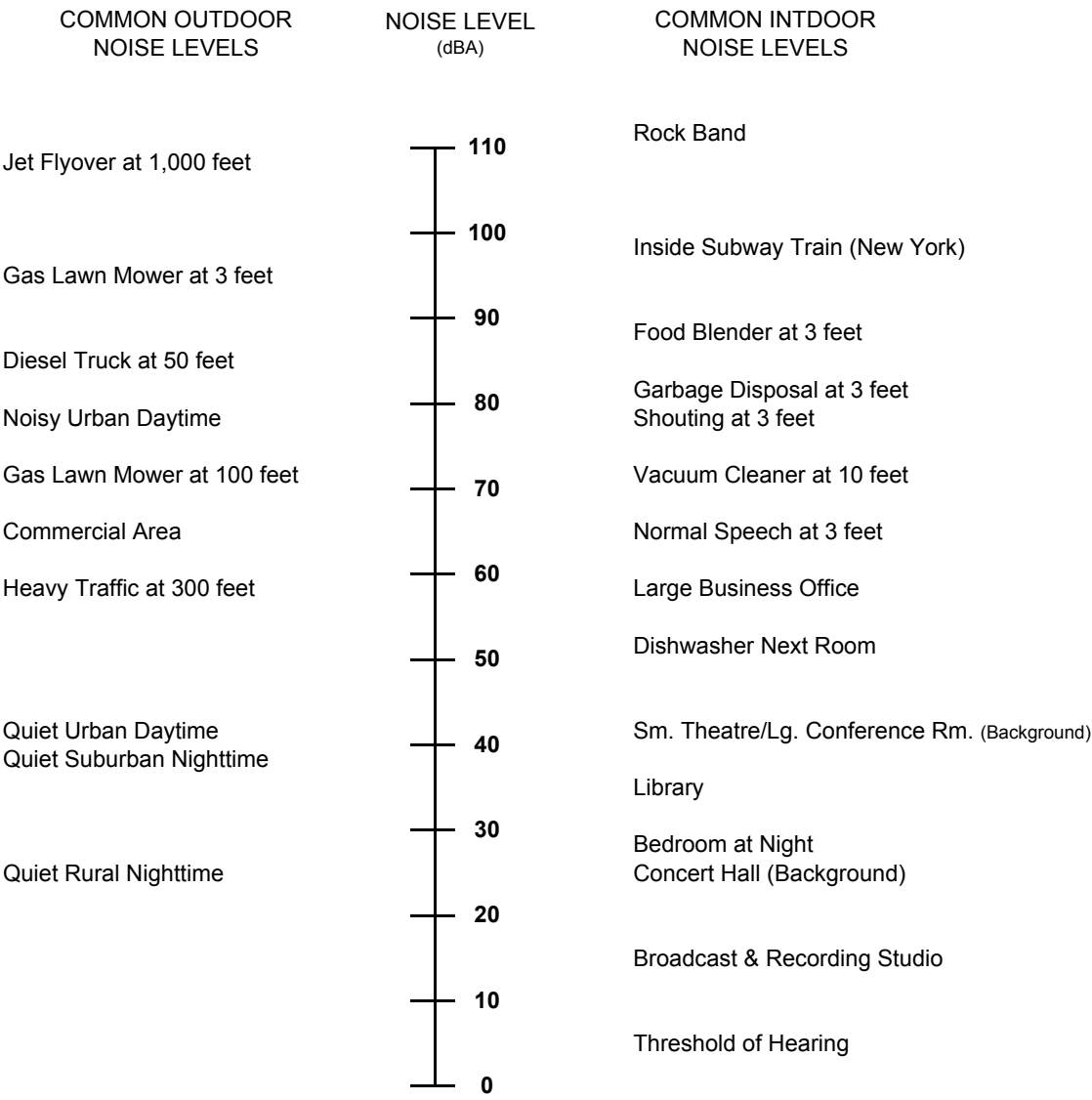
CONSTRUCTION EQUIPMENT NOISE RANGES



* The noise emission levels listed for various types of construction related machinery are based on limited samples. The values are presented in order to give the reader a basic understanding of where particular pieces of machinery fit on a noise-range spectrum. The equipment with an asterisk were provided by the American Road Builders Association, 1973.

Table B

COMPARATIVE SOUND LEVELS



COMMON INDOOR & OUTDOOR NOISE LEVELS

Mitigation Noise-2: A bio monitor will be required to ensure that potential noise impacts to nesting birds are insignificant. Work may be redirected if the noise adversely affects the nesting birds behavior.

Finding: Potentially significant effects due to construction noise will be mitigated below significance or temporary in nature and limited to standard working hours.

5.1.8 Air Quality

Impact: Potential impact will be attributable to new trips and grading of the project site during construction.

Discussion: The proposed project is an air quality non-attainment area. However, the proposed project is consistent with air quality management policies in the current Air Quality Management Plan and its emissions would be below the emissions thresholds established in the South Coast Air Quality Management District, *CEQA Air Quality Handbook*, April, 1993. Operational emissions associated with the proposed project would be less than significant. Therefore, no long-term significant effects to air quality are anticipated to occur from implementation of the proposed project.

Potentially significant air quality impacts during construction include fugitive dust from demolition and grading and emissions from utility engines, generators, and construction vehicles and heavy equipment. There are sensitive receptors in the adjacent residential area that might be exposed to blowing dust or odors associated with asphalt paving. Standard specifications for construction equipment and processes, including frequent watering, will reduce fugitive dust and other emissions below a level of significance.

Mitigation: The area disturbed by earthmoving equipment or excavation operations shall be minimized at all times. Demolition and earth moving activities shall be limited or redirected during periods of high winds. On-site vehicle speed shall be reduced to 15 mph. Storage piles of material and graded areas shall be either watered twice daily or covered to prevent fugitive dust emissions. Sensitive habitat located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by monitoring. All mechanical equipment shall be operated in compliance with appropriate air quality controls.

5.2 IMPACTS THAT ARE LESS THAN SIGNIFICANT & AVOIDANCE OF SIGNIFICANCE

5.2.1 Traffic & Parking

Discussion and Impact:

The project is not expected to have an impact on the level of service on the roadways adjacent to the project site because: 1) the existing traffic volumes are light both during

the weekdays and on weekends and are not expected to increase due to additional urban development; 2) the Park tends to generate the highest number of vehicle trips during traditional off-peak traffic periods such as the weekend; 3) even if the project volumes would triple, the resulting volumes using the park would be less than 50 vehicles during the peak periods when volumes on Elinvar Drive and Sapphire Road would then be less than 150 peak hour two-way trips.

An analysis of on-street parking showed that there is more than enough capacity to accommodate existing and forecast demand. It would be anticipated that the improvements to the entrance would encourage motorists to enter the park on the newly improved and paved roadway, rather than parking on the street. The project may have the effect of actually decreasing on-street parking demand.

5.2.2 Archaeological Resources

Discussion & Impact:

The validity/authenticity of the two reported prehistoric site locations (CA-SBA-5283 and CA-SBA-5284) reported to lie near the APE is considered questionable. Numerous attempts by archaeologists to relocate the reported site locations have all been unsuccessful. The CA-SBA-5283 reported site location lies outside the APE on a steeply elevated ridge which will not be subject to direct or indirect project related impacts. The reported site location of CA-SBA-5284 was mapped just outside the APE in a sensitive riparian habitat adjacent to a drainage and will not be impacted. Therefore, the proposed project is not expected to have any impact upon archaeological resources.

Mitigation

No mitigation is anticipated, however, in the unlikely event that cultural materials are discovered during construction, work will be redirected until a state park archaeologist can recommend a course of action that would avoid or eliminate potential significant effects to cultural resources.

5.2.3 Historic Resources

Discussion & Impact

Bane Canyon may be historically significant as the site of the route of a minor historic transportation corridor. While it may have played a minor role in the transportation of people, goods, and livestock as early as 1860 (or earlier), there is no substantial evidence to suggest that its historical importance predates its use as a ranch road during the 1921-1950 Pellissier/Rolling M Ranch complex period. While the route through the canyon may be historic, the road bed has experienced considerable alterations and improvements that have diminished its historic integrity. Because of this, the planned road improvements would not have an adverse effect on a historic resource.

5.2.4 Recreation

Discussion & Impact

Recreation impacts will be adversely affected when the existing road is closed to the public during construction where the new road and old road are on the same alignment. The closure may be as long as 6 months. Access to the park would remain open from other trail access points. Park closure will be minimized and publicly announced to reduce recreation impacts. It is not anticipated that these impacts would be significant due to the short-term nature of the closure.

5.3 EFFECTS WITH LITTLE OR NO IMPACTS

There will be little or no effect on agriculture, power or sewer systems, schools, population and housing, land use, and mineral resources,

5.4 BENEFICIAL EFFECTS

The project will have significant beneficial effects on recreational access by allowing park users to easily visit the interior of Chino Hills State Park and the public facilities and programs at the Rolling M Ranch. Additionally, existing erosion, sedimentation, and water quality impacts from the existing road will be improved through the use of bridges at the drainage crossings and the elimination of the berms along the mixed-use trail (existing road).

5.5 ENVIRONMENTAL ALTERNATIVES ANALYSIS

5.5.1 No Project Alternative

The No Project Alternative would continue the status quo. However, the stated needs of providing a safe, convenient, “all-weather” access for cars, recreational vehicles, trucks with horse trailers and buses to the Park interior, and the campground and public day-use facilities at the Rolling M Ranch would not be met. Given the current growth and demand for recreational resources near urban areas, one of the primary purposes for the park acquisition would not be met because many people would be unable to access the Park’s interior.

5.5.2 Environmentally Superior Alternative (Slaughter Canyon)

This alternative begins inside the park at the paved portion of the existing entrance road and travels in a northeasterly direction roughly following an existing trail through the canyon and up the ridge to the Park boundary. Then the road follows the ridgeline within private property toward Butterfield Ranch Road at Park Crest Drive. A 300-foot long bridge structure would be required and design speed would vary between 35 mph and 25 mph. This alternative also has unstable slopes that would require flattening back of slopes or retaining structures. An active fault, the Chino fault crosses this alternative. The Slaughter Canyon alternative follows the ridgeline and, therefore, requires the least

amount of drainage. The Slaughter Canyon Alternative would have less effect on water quality than the Preferred Alternative because it would move the road away from the creek. However, should this alternative be chosen, it is likely that some form of the existing entrance road would remain in place, at least as a trail. The City would still need to maintain vehicular access to its' water storage facility and pipeline along the existing route. Trail users from the nearby communities may continue to park on Sapphire Road and Elinvar Drive to access the park.

As studied by Psomas, the Slaughter Canyon alternative has an impact of approximately 1 to 2 acres on highly sensitive habitat and species and the least impact on moderately sensitive habitats. This alternative will affect less acreage containing moderate quality annual grassland, California sage, white sage, western sycamore, and mulefat. It would impact approximately 0.15 more acre of coastal sage scrub, 13 acres more of low quality annual grassland, and 0.24 acre of high quality arroyo willow. Overall, the Slaughter Canyon Alternative had less impact on high quality habitat by approximately 0.8 acre and less impact on moderate quality habitat by approximately 7.7 acres. The moderate quality habitat is important because of its size. The relatively large size of the habitat would allow it to support a number of special status species. Construction staging in Slaughter Canyon would potentially affect adjacent riparian habitat. There would be less mitigation cost associated with the Slaughter Canyon alternative.

Archaeological sites would be impacted but have not been determined to be significant. However, additional testing would be recommended should this alternative be chosen. Slaughter Canyon would have the highest visual impacts of the build alternatives. The road would require construction of a prominent fill slope that would be visible to park users, travelers on Butterfield Ranch Road and nearby residences. This impact would be a significant adverse visual effect that would only be moderated by landscaping and the eventual construction of housing or other urban developments along the slopes adjacent to the road.

This alternative crosses private property that does not have a willing seller. It is not California State Park's policy to pursue condemnation to acquire the property when there is an alternative that provides access to the site. Should the property become available, CSP may pursue its construction provided that final working drawings and construction on the Preferred Alternative have not been approved. Should the alternative become viable, final engineering design would likely contain elements such as lower design speed and narrower road width that would allow further reduction of the project footprint.

6 CEQA REQUIRED CONSIDERATIONS

6.1 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH CANNOT BE AVOIDED

Construction and operation of new entrance road and facilities would result in the use of nonrenewable resources during construction, including fossil fuels, natural gas, and water and building materials such as concrete and steel. However, this project in the long term would result in only an insignificant irreversible or irretrievable commitment of resources, largely from the presence of the roadway near a riparian corridor and park operation resources that will be committed to maintaining the road.

6.2 RELATIONSHIP OF LOCAL SHORT-TERM USES AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The long-term use of the project site for public park access and use will provide a unique opportunity to the local community, region, and vacation travelers to enjoy a unique park that takes one back in time within a highly urbanized area. Short-term construction impacts will adversely affect park users due to a temporary loss of vehicular and trail access at the existing entrance road. However, this will be offset by improved safety and access to the Park interior and facilities.

6.3 GROWTH INDUCING IMPACTS

There will be no growth inducing impacts because the project does not create new housing or provide infrastructure to support new residential, commercial or industrial development. The proposed project will provide a quality of life improvement to the existing and growing communities around it, however, as a park improvement, the project does not contribute to such growth.

6.4 CUMULATIVE IMPACTS

California State Parks has approved two other projects recently in Chino Hills State Park under the February 1999 Chino Hills General Plan. Construction will be finalized on the Campground and Public Use Facilities at the Rolling M Ranch in the Fall of 2004. Plans are funded and underway for the construction of a Visitor Center at the western end of the Park off State Highway 142. The project, when considered with other projects in the area, will not have significant adverse cumulative environmental effects but will have significant beneficial effects including increased public recreational and educational access.

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Jeff F. Ahlstrom, P.E., P.L.S., Associate Civil Engineer, BS Civil Engineering, SDSU, 19 years design experience, including 13 years experience working for private consulting civil engineering firms and 6 years with California State Parks Southern Service Center.

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Roy Pettus, M.A., Associate Archaeologist, 27 years archaeological experience in the southern California region. Listed as qualified archaeologist on the Orange County Register of Qualified Archaeologists.

Tina Robinson, Project Analyst, B.S. Animal Science, MBA Finance, 20 years experience in environmental studies. 15 years social, community, and land use impact analysis as part of the environmental studies.

Darren Scott Smith, Associate Resource Ecologist, B.A. Geography, M.A. Biogeography, 11 years professional experience in biological resource management including City of San Diego (1 year), San Diego State Foundation (2 years as a research associate), California State Parks (3-years) and 5 years in a private consulting firm.

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